USER MANUAL

DVR

Digital Video Recorder

Contents

SAFETY INSTRUCTION **1**

CHAPTER 1: DVR FEATURES **2**

CHAPTER 2: LAYOUT **3**

2.1 DVR FRONT PANEL 3

2.1.1 4-CH DVR Front Panel *3*

2.1.2 8-CH DVR Front Panel *4*

2.2 REAR PANEL 5

2.2.1 4-CH DVR Rear Panel *5*

2.2.2 8-CH DVR Rear Panel *5*

2.3 REMOTE CONTROLLER 6

CHAPTER 3 DVR INSTALLATION **7**

3.1 HDD INSTALLATION 7

3. 2 CAMERA AND MONITOR CONNECTION 7

3. 3 POWER SUPPLY CONNECTION 7

CHAPTER 4: DVR START UP **8**

4.1 SYSTEM INITIALIZATION 8

4.2 LIVE SCREEN 8

CHAPTER 5: DVR MENU **8**

5.1 POP-UP MENU 8

5.2 MAIN MENU GUIDE 9

5.3 MAIN MENU 10

.2.1 Display setup *10*

5.2.2 Record setup *10*

5.2.3 Network Setup *11*

5.2.4 Record Search *13*

5.2.5 Playback Player *14*

5.2.6 Device Management *16*

5.2.6.1 HDD Management 16

5.2.6.2 Alarm Setup 17

5.2.6.3 PTZ setup 19

5.2.6.4 Mobile 19

5.2.6.5 Motion Detect Setup 20

5.2.7 System *20*

5.2.7.1 Time Setting 20

5.2.7.2 Password 20

5.2.7.3 Video/Audio Setup 21

5.2.7.4 Language 21

5.2.7.5 System Information 21

5.2.7.6 Maintain 22

5.4 MENU LOCK 22

5.4 RECORD SEARCH 23

5.5 PTZ CONTROL 23
5.6 RECORD 23
5.7 STOP RECORD 23

CHAPTER 6: WEB APPLICATION MANAGER 24

6.1 PLUG-INS DOWNLOAD AND INSTALLATION 24
6.2 WEB CLIENT LOG-IN 24
6.3 WEB CLIENT INTERFACE 25
6.3.1 Menu Bar 25
6.3.1.1 Live Display 25
6.3.1.2 Playback 25
6.3.1.3 Remote Setting 26
Display 26
Record 27
Alarm 27
Network 28
Device 29
System 30
6.3.1.4 Local setting 32
6.3.1.5 Logout 32
6.3.2 PTZ Control 32
6.3.3 Play Control 32

CHAPTER 7: SPECIFICATIONS 33

CHAPTER 8: APPENDIX 34

8.1 RECORD ALARM SETTING 34
8.2 SUSTAINABLE RECORD TIME LIST 34
8.3 MAIL BOX SERVER LIST 34
8.4 TROUBLESHOOTING 35
8.5 SYSTEM CONFIGURATION 36
8.6 ACCESSORIES 37

Safety Instruction

1. Read Instruction

All the safety and operating instruction should be read before the equipment is operated.

2. Power sources

This equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power, please consult your equipment dealer.

3. Objects and Liquid

Never push objects of any kind through openings of this equipment and / or spill liquid of any kind on the equipment as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock.

4. Water and / or Moisture

Do not use this equipment near water or in contact with water.

5. Heat sources

Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifier) that produce heat.

6. Cleaning

Unplug this equipment from the wall outlet before cleaning it. Do not use liquid aerosol cleaners. Use a damp soft cloth for cleaning.

7. Lightning

Unplug this equipment during lightning storm or when unused for long periods of time.

8. Accessories

Do not place this equipment on an unstable cart, stand or table. When a cart is used, use caution when moving the cart / apparatus combination to avoid injury from tip-over.

9. Moving

Disconnect the power before moving the equipment. And the equipment should be moved with care.

10. Attachment

Never add any attachments and/or equipment without the approval of the manufacturer as such additions may result in the risk of fire, electric shock and other personal injury.

11. Correct Batteries

Risk of explosion occurs if battery is replaced by an incorrect type. Therefore you must use the same type of battery as the one being used in the product.

12. Ventilation.

Do not block any ventilation openings, installation of the equipment in the rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

13. Overloading

Do not overload wall outlets and extension cords to avoid the risk of fire or electric shock.

14. Reliable Earthlings (Grounding)

Reliable grounding of rack mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit.

Chapter 1: DVR Features

Function	Brief and Description
Real-time Monitoring	Double video output, with Monitor or VGA virtual output, support Net-viewer and Mobile Live monitor, and also support zoom in/out, auto sequence and PIP display.
Record Function	H.264 video compression format; record quality adjustable, multiple recording modes (Always, Scheduled, Manual, Motion detection and remote record)
Record storage	Support SATA large capacity HDD and save real-time record image to HDD.
Playback	Support DVR single CH and multiple CH Search/Playback of recorded files.
Backup	Support DVR backup via USB flash drive, removable hard drive, DVD RW and network.
Alarm Setting	Supports HDD & video input alarm management.
Network operation	Supports remote surveillance by authority users to increase system security.
Mouse Operation	Supports Mouse operation for faster menu navigation.
PTZ Control	Supports PTZ camera operations through RS-485.

List 1-1

Other Features：

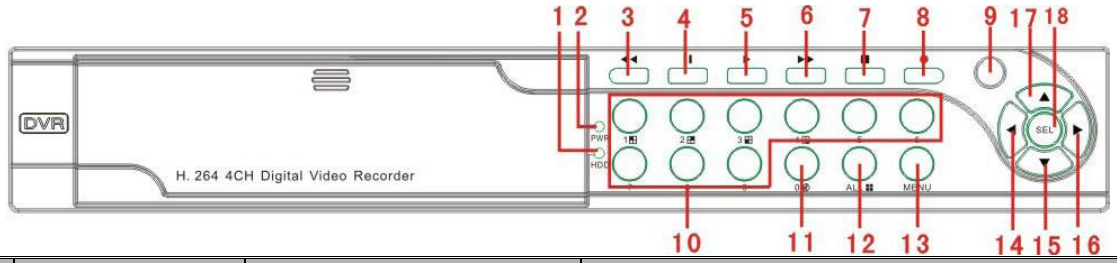
- H. 264 video compression format; supports D1, HD1 and CIF resolutions;
- ADPCM audio compression format;
- Windows Graphical interface; embedded real-time Linux 2.6 operation system;
- Multiple operations (Live, record, playback, backup, network surveillance and mobile phone monitoring simultaneously);
- Supports Double Encode bit network transmission;
- Supports remote live viewing via 3G mobile network;
- The video package time is adjustable;
- Friendly Menu reminder;
- USB2.0 ports for back-up, upgrade and mouse operation;
- With IR remote control;
- Multiple language OSD;
- Supports auto maintenance

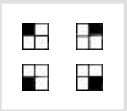
Chapter 2: Layout

2.1 DVR Front Panel

DVR is a short form of Digital Video Recorder.

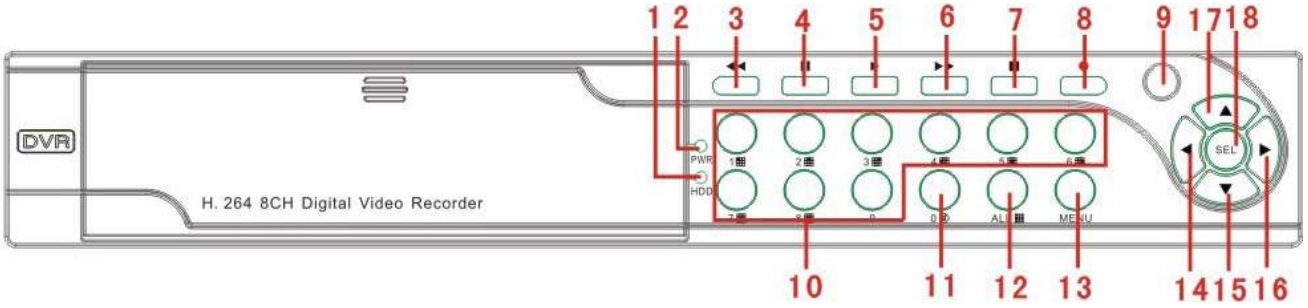
2.1.1 4-CH DVR Front Panel



Item	Key title or Indicator	Remark	Function & Description
1	HDD Indicator	**HDD**	When the "Red" indicator flashes it means the hard drive is being read or written to.
2	Power Indicator	**PWR**	If the "Green" indicator is on the system is getting power normally.
3	REW	◂◂	Left direction key, Rewind key; Pressing the key to decrease PTZ rotation speed and parameter value.
4	PAUSE	II	Pause / play frame by frame manually.
5	PLAY	▸	Enter into [Record Search] Menu; Play record file
6	FWD	▸▸	Right direction key, Forward key; Pressing the key to increase PTZ rotation speed and Parameter value.
7	STOP	■	Stop Playing and/or manual recording.
8	REC	●	Start manual record
9	IR Receiver	●	Receives IR signal from Remote Controller
10	CH select Key: CH1 CH2 CH3 CH4		CH select key
11	MUTE		Mute on/off
12	QUAD	▪	On Live display or Playback mode, switch to Quad display.
13	MENU		Enter into Main menu
14	LEFT	◂	Move left
15	Down	▾	Move to down
16	RIGHT	▸	Move right
17	UP	▴	Move to up.
18	SEL		Enter into pop-up menu.

List 2-1

2.1.2 8-CH DVR Front Panel

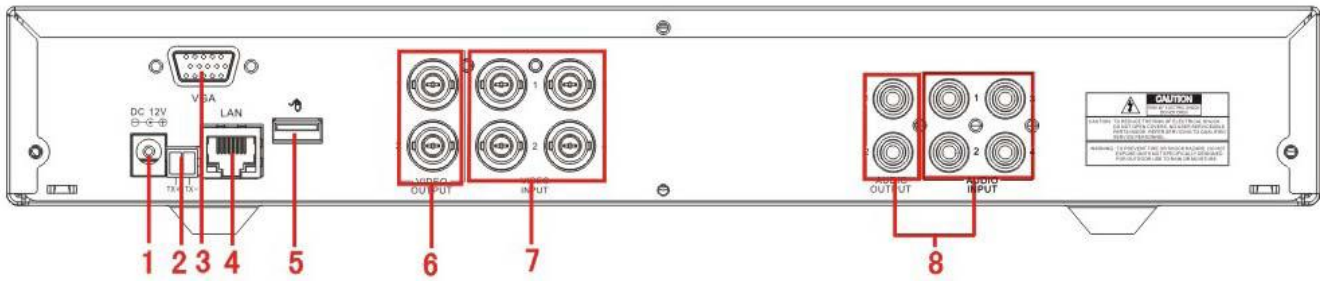


Item	Key title or Indicator	Remark	Function & Description
1	HDD Indicator	**HDD**	When the "Red" indicator flashes it means the hard drive is being read or written to.
2	Power Indicator	**PWR**	If the "Green" indicator is on the system is getting power normally.
3	REW	◀◀	Move to left; Rewind playing at multiple speeds; Decrease parameter value of image setting.
4	PAUSE	II	Pause/play frame by frame manually
5	PLAY	▶	Enter into pop up menu; Play recording file
6	FWD	▶▶	Move to right; Forward playing at multiple speeds; Increase parameter value of image setting
7	STOP	■	Stop playing; Stop manual record
8	REC	●	Start manual record
9	IR Receiver	⬤	Receives IR signal from Remote Controller
10	CH select Key: CH1 CH2 CH3 CH4 CH5 CH6 CH7 CH8		CH select key
11	MUTE		Mute on/off
12	QUAD		On live mode, clicking the button will switch to Quad display.
13	MENU		Enter into Main menu
14	LEFT	◀	Move left
15	Down direction key	▼	Move to down
16	RIGHT	▶	Move right
17	Up direction key	▲	Move to up
18	SEL		Enter into pop up menu.

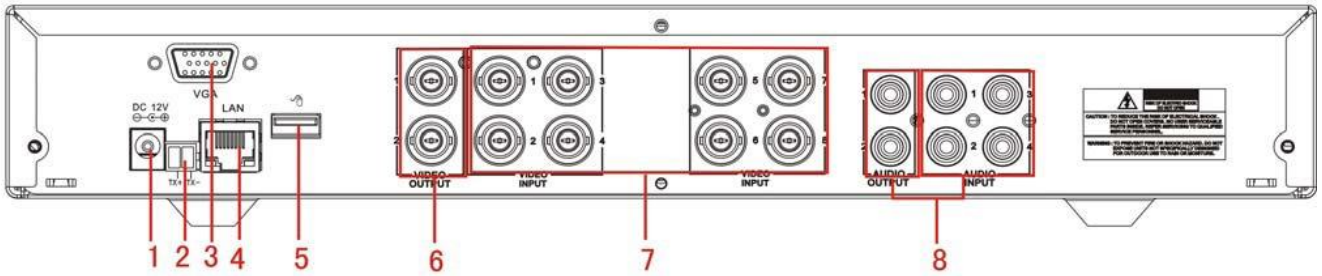
List 2-2

2.2 Rear Panel

2.2.1 4-CH DVR Rear Panel



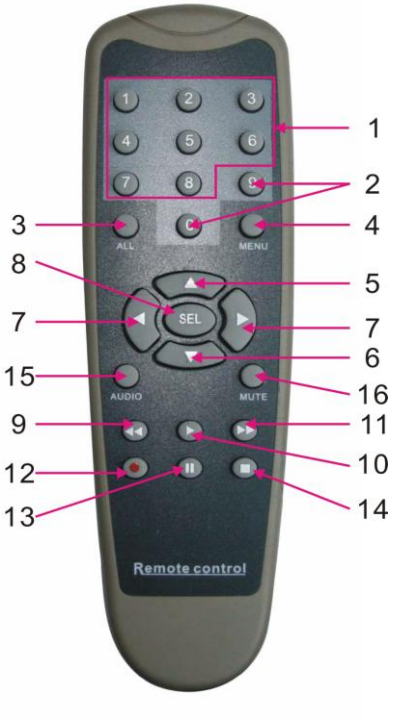
2.2.2 8-CH DVR Rear Panel



Item	Physical port	Connection method
1	Power Port	Connect power supply - DC12V 3A/5A
2	RS485	Connect PTZ cameras
3	VGA Port	Connect to VGA monitor, such as PC monitor (Optional)
4	Ethernet Port	Connect LAN, Ethernet (RJ45 interface)
5	USB Port	Connect USB mouse
6	Video output	Connect monitor output (BNC interface)
7	Video input	Connect CH1-8 (Virtual) video input device (BNC interface)
8	Audio I/O	4CH DVR: 4CH audio input and 2CH output; 8CH DVR: 4CH audio input and 2CH output. (RCA interface)

List 2-3

2.3 Remote Controller



	Key title	Key function
1	**1-8**	Channel select 1-8; Numeric key
2	**9, 0**	Numeric key
3	**ALL**	Multiple display mode
4	**Menu**	Enter into Main menu/Exit
5	▲	Up direction key, Volume adjust
6	▼	Down direction key, Volume adjust
7	◀/▶	Left/Down direction key, Decrease/increase parameter value of control bar
8	**SEL**	Select key/Edit key; Confirm the selected operation.
9	◀◀	Rewind key
10	▶	Enter into record search menu; Play key
11	▶▶	Forward key
12	●	Record key
13	▌▌	Pause/Sequence key
14	■	Stop manual record; stop playing
15	**Audio**	No function for this particular model
16	**Mute**	Mute function

List2-4

Mouse Operation

Except using buttons of front panel or remote controller, you also can use mouse to perform system operation.

TYPE	Function
Click left key of Mouse	In menu lock mode, Enter into pop-up menu and clicking any sub menu to pop up Log-in window; on menu unlock mode, enter into pop-up menu, and then clicking left key to enter into any sub menu directly.
	After entering into main menu, clicking left key could enter into any sub menu; On [Detailed file] menu mode, clicking left key could playback one recording file.
	Change the status of check box and motion detection area.
	Clicking combo box to access pull-down menu; Click left key to stop dwell time display when dwell time display is activated.
	By clicking left key you can adjust Color control bar and volume control bar.
	Clicking combo box to access pull-down menu
	By clicking left key, you can select values in edit boxes or pull-down menu and supports special symbol, numeric and character input, use instead of [Enter- ↵] or [Backspace ←]
Click right key of Mouse	In live display mode, clicking right key will display pop-up menu (shown as Picture 5-1).
	In Main menu or sub menu mode, clicking right key will exit current menu.
Double-click Left key of Mouse	In live display or playback mode, double-clicking left key will maximize the screen.
Moving Mouse	Select menu item
Sliding Mouse	On motion mode, sliding mouse will select motion area; On [Color set] menu mode, sliding mouse will adjust color control bar and volume control bar.

List2-5

Chapter 3 DVR INSTALLATION

3.1 HDD Installation

Caution：

1. Please do not Install or take out hard drive when DVR is running!
2. Some model has a HDD drawer. Please use provided key to take out the HDD drawer and put HDD into the drawer correctly.

HDD Installation:

- After cutting power, remove screws on two sides of body and on rear panel and open DVR upper cover carefully;
- Connect data cable and power cord of HDD to main board securely shown as Picture 3-1.

Picture 3-1

Picture 3-2

- Fix the HDD back body shown as Picture 3-2;
- Put the upper cover back carefully, re-attach screws.

Note: If users need higher performance HDD, strongly recommend to use special HDD for Security Protection.

3.2 Camera and Monitor Connection

Connect camera cable to video input of DVR, and from video output of DVR to Monitor via BNC connector (Refer to section2.2-Rear Panel); or

If the camera is a PTZ speed dome, you could connect RS485 A & B to the according port of DVR respectively (refer to system figuration on Chapter 8).

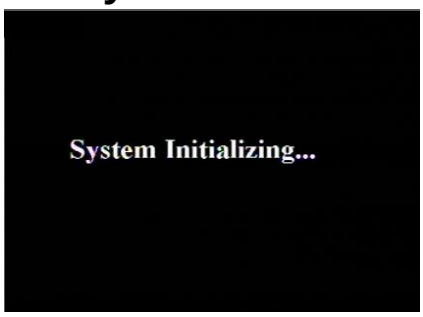
3.3 Power Supply connection

Please only use the power adapter supplied with the DVR.

After power on please make sure the video I/O connection well and connect the audio I/O with RCA cable.

Chapter 4: DVR Start up

4.1 System Initialization



Picture 4-1

After connecting the Power cable of DVR to wall outlet, you will enter into the system initializing screen shown as Picture 4-1.

4.2 Live screen

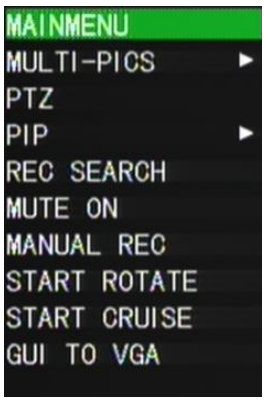
Picture 4-2

After finishing initialization the system will enter into Live screen. Picture 4-2 is the 9-split display defaulted by system, which is showing no video input status. Once there are video inputs, the screen will display live images from the cameras. In Live mode, if you use the mouse to double-click the live image of any channel, the image will be maximized to full screen, by double-clicking again, image will be come back to 4-split or 9-split display mode; clicking the right button of the mouse will enter into Pop-up Menu; clicking the left button of the mouse allows you select menu items; and clicking any area outside the menu allows you exit the Pop-up menu.

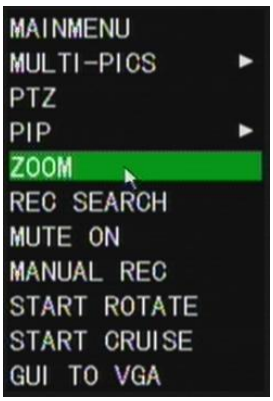
Note: When internal HDD is not connected or an error occurs, the character “H” will appear on the first channel of the live screen and accompany buzzer alarm. If you want to close the buzzer alarm, please enter into [Device manage→Alarm setting] to set HDD loss, HDD space not enough and alarm output to “off”.

Chapter 5: DVR Menu

5.1 Pop-up Menu



Picture5-1a



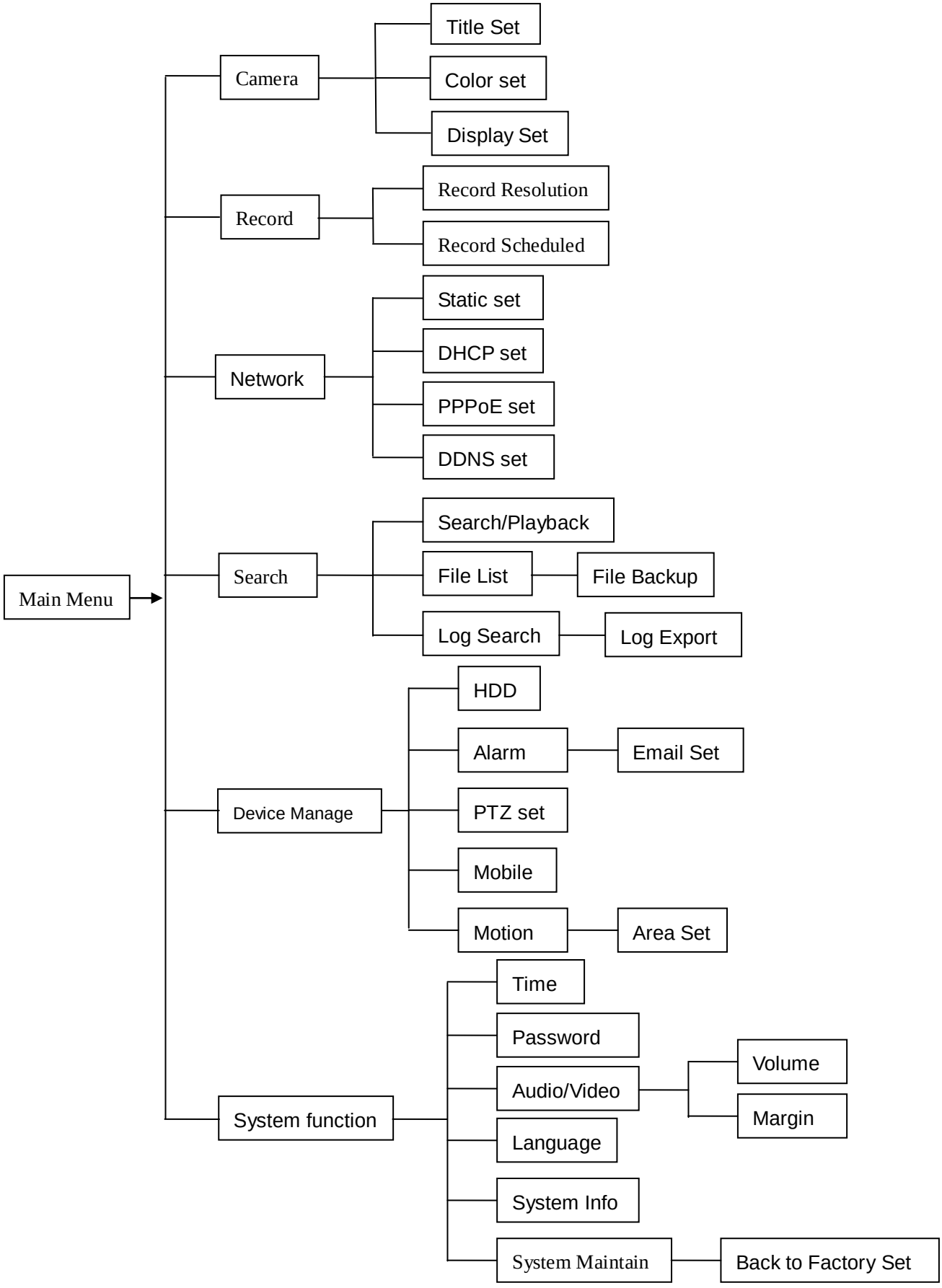
Picture5-1b

Picture5-1c

After finishing system initialization, click right key of mouse on Live mode to enter into Pop-up Menu. Now you could perform parameter setting and operate on Main Menu, Multi-Pics, PTZ, PIP, Rec Search, Mute, Manual record, Start Rotate, Start Cruise and UI to VGA etc.

Note: options of the Pop-up menu will differ depending on different parameter setting and application environment.

5.2 Main Menu Guide



5.3 Main Menu

Picture 5-2

After clicking right button of mouse, pop-up menu appears on the screen. You can click [main menu] option on pop-up menu mode to enter into Main menu interface (Shown as Picture 5-2). In Main Menu mode, you can control device management settings, such as Display, Record, Network, Search, Device and System setting etc.

.2.1 Display setup

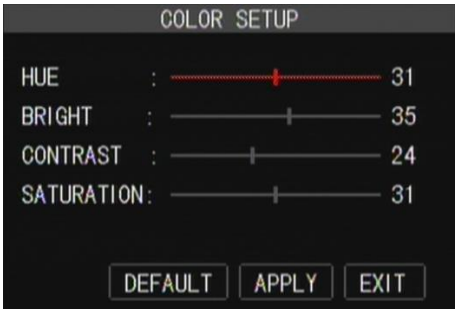
Go to [Main menu→Camera] to set up the CH name and position for each channel shown as Picture 5-3.

Picture 5-3

You can set up whether each channel can be previewed or not under Live display and/or record mode, enable live time or not under live screen and set up record time or not on the record history.

Please note that the name of each channel supports up to eight characters.

Copy function: allow you copy all data of one channel to any other channel.



Picture 5-4

You can adjust image brightness, saturation, contrast and hue parameters of each channel after entering into [Color] menu.(shown as picture 5-4).

Picture 5-5

Explanation：

1、 The modifications will be available after clicking [APPLY] button on the bottom of the sub-menu windows and being prompted to save and then clicking [ok] button.
2、 If you want to cancel the modification, click [Exit] button to exit the menu.
3、 When clicking [DEFAULT] button, all system default values will be reset to default value.

5.2.2 Record setup

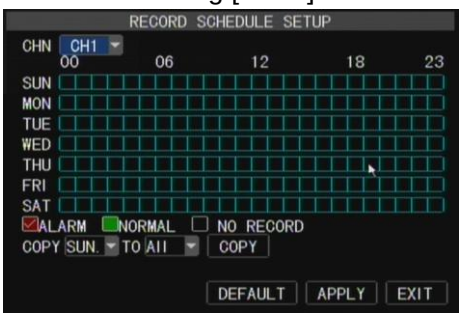
Click [Main Menu] →[Record] to enter into [Record Setup] menu (Shown as Picture 5-5).

- [**Record**] option allows you set up record status (Enable/Disable) of each channel.
- [**Quality**] include three options – Best, Good and Normal.

Picture 5-6

- [**Frame rate**] include two options – Fixed and Manual. When set to "Manual" and click [Frame rate setup] option, you may allocate the frame rate for each channel.
- [**Audio**] option allows you turn audio on/off.
- [**Mode**] allow you select record modes, including Always and Scheduled. To record 24 hours a day set the [Mode] to Always. To record on motion or a set schedule, select the [Schedule] option.
- [**Pack time**] indicates maximum continuous record time (15, 30, 45 and 60 min).
- [**Copy to**] allow you copy current settings to any other channel.

When setting [Mode] to Schedule, the schedule screen will appear as shown in Picture 5-7.



Picture 5-7

[Record CH] options include All, CH-1, CH-2, CH-3, CH-4, CH-5…CH-16 in turn. Please click the channel you need.

To setup weekly schedules, tick-select the box of the record status you want (Alarm, General, or No Record) and then click on each box in the schedule time line that you want this method to apply to. You can use the [From – To] pull-down menus and Copy button to copy settings from one day to another day or all days.

After you complete the schedule you activate it by clicking the [Apply] button.

You can also click the [Default] button to use the system defaults.

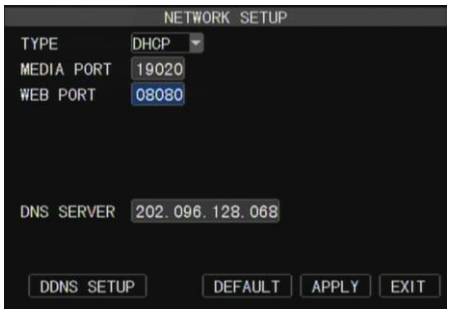
Explanation: On the [record] Set and [Search] mode, original color stands for no record, "Red" stands for alarm record and "Green" stands for normal record

5.2.3 Network Setup

Enter into [Main Menu→Network Setup] to setup the network configuration (Shown as picture 5-8):

After selecting network mode - such as DHCP, PPPOE or static allocation- and setting up web ports，you can visit DVR remotely through a network or internet.

DNS: DNS server is generally provided by local ISP. Herein please enter the IP address of your DNS.

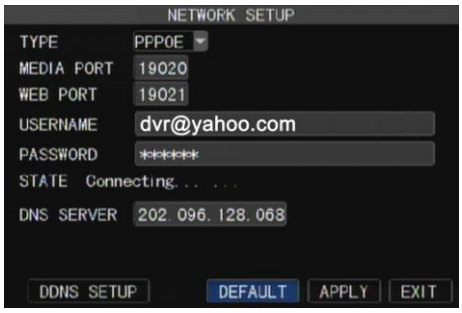


Picture 5-8

When selecting DHCP, the router will allocate DVR IP address automatically after you exit the menu. The IP address of the DVR might change whenever the unit is turn on.

Picture 5-9

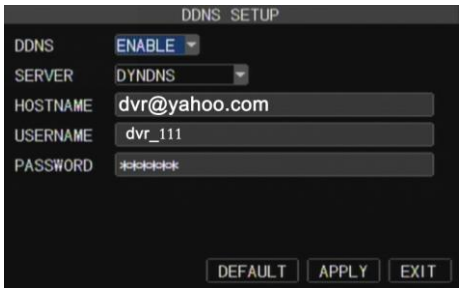
When selecting Static from the Type, user can directly set IP address, Subnet Mask, Gateway, Media port, Web Port and DNS shown as Picture 5-9.



Picture 5-10

When selecting PPPoE form the Type, user can input user name and password provided by ISP and set Media and Web port (details please refer to the Picture 5-10). You can visit your DVR via public network without port forwarding when network type is set to "PPPoE" and web port is right.

DDNS (Dynamic DNS) is a service that register a domain name and the floating IP address with the DDNS server so that the domain name can be routed to the IP address even if the IP address is changed in a dynamic IP system.

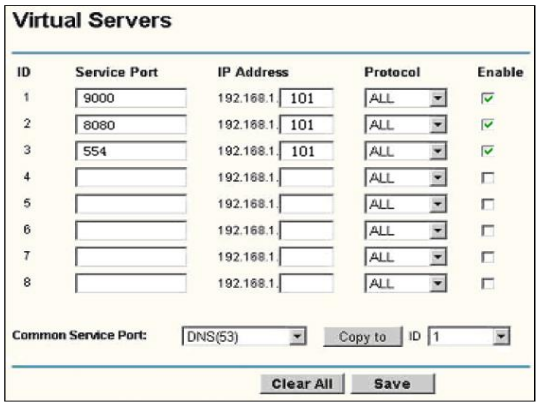


Picture 5-11

At the bottom of the NETWORK SETUP window there is an option to setup the DVR to be accessed through a DDNS service. When you click on the DDNS button it brings up the window displayed as Picture 5-11. You can access the DVR through a static or dynamic IP address; however a dynamic address can change from time to time. How often depends on your service provider. When it changes, you need to go to a website such as www.myipaddress.com from a computer attached to the same router as the DVR to find out what the new IP address is.

- **Server:** select a Dynamic domain name server provided by ISP;
- **Host Name:** Input host name registered from Dynamic Domain Naming System, for example: dvr2011.dyndns.org;
- **User Name:** Input a user name registered before applying for a domain name;
- **Password:** Input a password you set when registering a user name.

Router's Port Forwarding



Picture 5-12

Port forwarding is required when you want to access the DVR connected to the router from outside of the router's network.

1. Input router's IP address from IE-based browser to open the Router configuration interface;
2. Click [Transmittal rule] option to take you to the port forwarding instructions for your router;
3. Set the corresponding parameters illustrated in Picture 5-12. When server port and web port forwarding the DVR IP address, user can visit the DVR remotely.
4. User can enter below website or domain name as per current PC network environment to visit the remote DVR.

1. http://public IP: Web port（such as 0080）
2. http://intranet IP: Web port（such as 0080）（only available at the same LAN）
3. http://dvr2011.dyndns.org: Web port（such as 0080）

Friendly Reminder: The router's port forwarding interface may be different, however, when entering into virtual server, user will always need forward port 8080 and port 9000 of router to IP address of DVR allocated or automatically captured, and select [All] or [Both] in corresponding protocol column and save the

above setting.

Above steps may differ from the router device depending on the manufacturer.

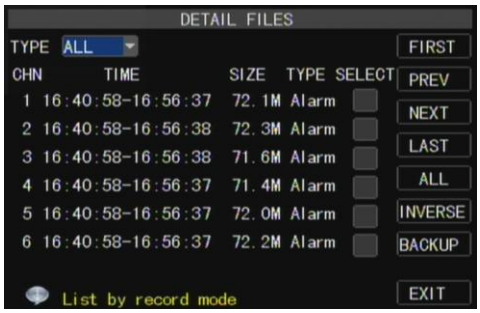
5.2.4 Record Search

Click [Main Menu→Record Search] to enter into below window shown as Picture 5-13.

Picture 5-13

- **Channel:** allows you select the channel(s) you desire to search.
- **Time Search:** In the Video Search screen, user can search for a specific date and time for a recording and view it in Playback mode. This is useful for hunting a specific recording of an incident if you know the date and time it occurred.
- **Date Search:** In the Video Search screen, user can search for all the recordings in a specific date. To execute a video search, highlight and select the date numeric field，and then click a detailed time quantum of the specific date, system will start the playback from the first recoding of the time quantum.
- **Playback Mode:** You can use the Playback Control bar to operate the Fast Forward (X2, X4 and X8), Slow play (1/2, 1/4 and 1/8 speed), Play, Pause/Frame, Rewind(X2, X4 and X8). When ending playback, DVR will return back to previous menu.

File List: click [File list] button to enter into the [File List] screen shown as Picture 5-14, the video recordings for the time quantum will appear in the screen. And you also can filter the recordings you want to view by the Channel or recording mode based on date/time search.



Picture 5-14

First： Indicates the first page of recording history you have searched. When you view other pages, clicking [First] button brings you back to Page one.

PREV (Previous page): When viewing event list, clicking [Previous page] button will take you back to page before the one you are currently viewing (except the first page).

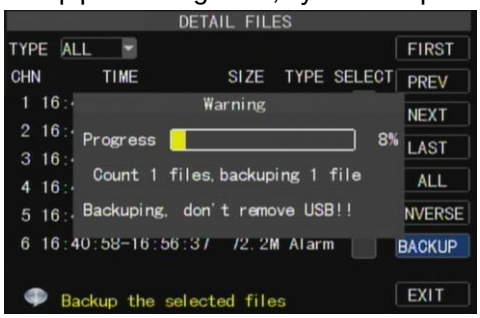
NEXT (Next page): When viewing event list, clicking [Next page] button will take you to the page after the one you are currently viewing (except the last page).

LAST (Last page): Indicates the last page of recording history you have searched. When you view other pages, clicking [Last page] button will take you to the Last page.

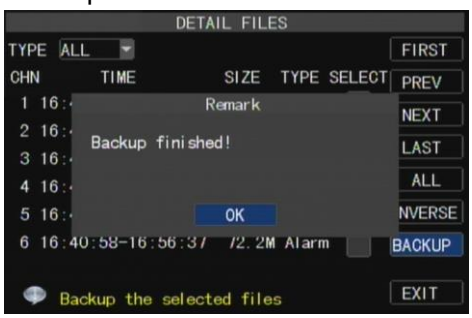
ALL (Select All): Allows you to select all the events on the current page.

INVERSE (Select Invert): Allows you to select other events on the current page except those you have currently selected.

- **Back up:** In the [File List] mode, if you wish to backup records, please tick-select the [Select] check-boxes which corresponds to the recording and click [Backup] button to enter into the below windows illustrated in Picture 5-15. When backup processing ends, system will prompt you “Backup finished!” shown as Picture 5-16.



Picture 5-15



Picture 5-16

Note:

1. Backup file will be saved as H264 format; you can playback the recorded files using the PlayBack Player program (Refer to section 5.2.5-Playback Player) that comes with the DVR or through the net-viewer program.
2. Please make sure you have connected backup device, such as USB and DVD, well before backing-up.

➢ **Log Search**

In the Record Search screen, Click [Log Search] to pop up the Log search screen shown as Picture 5-17(a).

Select log type, enter start date & end date, and then click the [Search] button on the bottom of the interface to search all the logs you need shown as Picture 5-17(b).

Picture 5-17(a)

Picture 5-17(b)

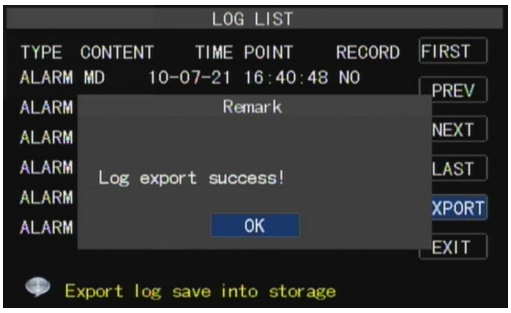
➢ **Export**

User can export all the logs which have been searched to USB flash disk and save it as TXT format.

Before exporting the logs, please make sure you have connected the USB flash disk well. Detail operations please refer to Picture 5-18.

After Log export success, please click [OK] button shown as Picture 5-19.

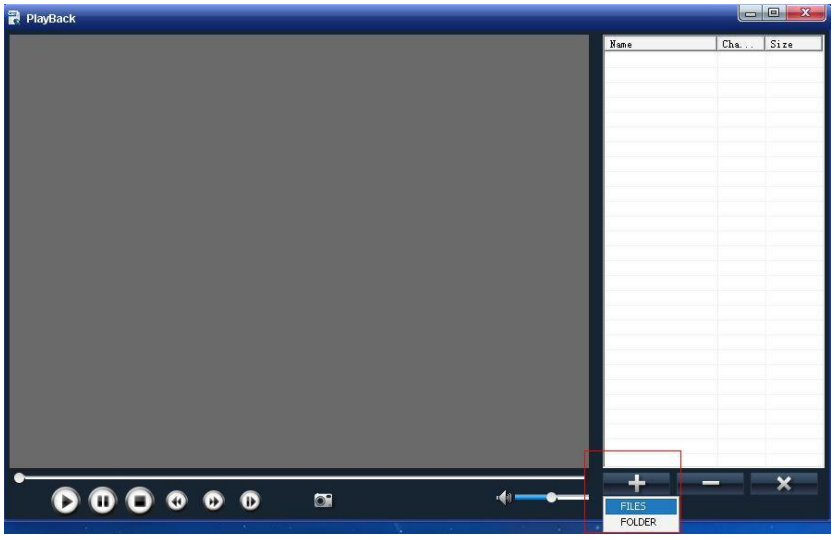
Picture 5-18



Picture 5-19

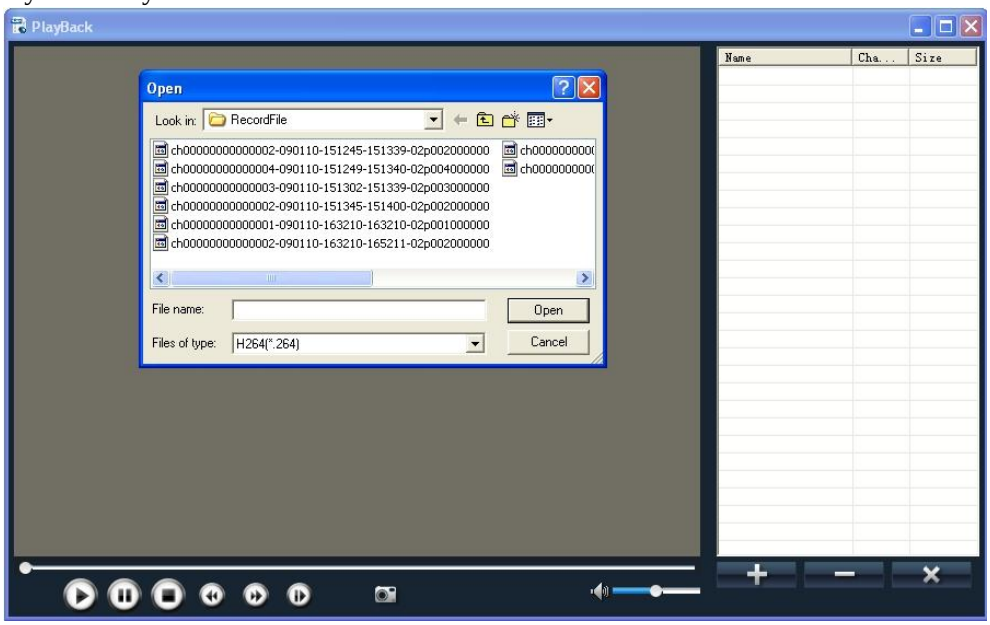
5.2.5 Playback Player

1. Copy backup file to your PC;
2. Open Playback Player, and then click [+] button to open the file shown as Picture 5-20



Picture 5-20

3. Select the playback file you desired from the file shown as Picture 5-21.



Picture 5-21

Note: Please select the file with *.264 format or *.nvr. The record file backed-up by USB flash disk or removable disk is with *.264 format, and DVD Recorder with *.nvr format.

4. Open backup file

Double-click the record event at the right side of screen to start record file playback.

Picture 5-22

The button functions from left to right in turn are as follows:

[Play] button: start playing record file

[Pause] button: pause the record file playback

[Stop] button: stop the record file playback

[Rewind] button: rewind playing the record file at X2, X4, X8 and X16 speeds.

[Forward] button: forward playing the record file at X2, X4, X8 and X16 speeds.

[Frame by frame]: Play the record file frame by frame.

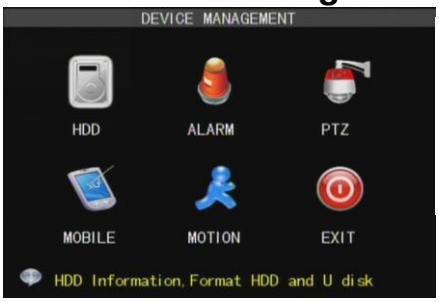
[Snapshot]: click the button to capture the record image and save the image to a specified position.

[Add]: click the button to add one record file

[Del]: click the button to delete one record file.

[**Del all**]: click the button to delete all the record files in the event list.

5.2.6 Device Management



Picture 5-23

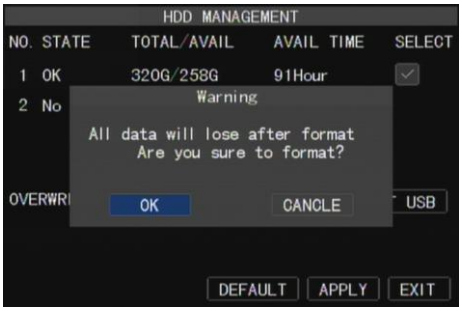
Options in device management include HDD, Alarm, PTZ, Mobile, and Motion set.

Click [Main Menu→Device Management] option to enter into the window shown as Picture 5-23.

5.2.6.1 HDD Management

Picture 5-24

In the [Device Management] screen, highlight and click [HDD] icon to enter into the window shown as Picture 5-24.



Picture 5-25

When DVR is connected to a HDD, the system will automatically detect if HDD is normal or not;

If the cable connected to HDD is loosen or HDD is abnormal, HDD status will be shown as “No Disk”, or,

If HDD need to be formatted, status will be shown as “no format”, otherwise, the HDD status will be shown as “Normal” (refer to Picture 5-25).

- **NO**：HDD number defaulted by system
- **STATE**：Available Hard drive. You could use HDD only when formatting the HDD and inspect its status normal.
- **TOTAL/AVAIL:** Indicates total space available on Hard Drive. / Unused space available on the Hard Drive.
- **AVAIL TIME:** Based on current image detail/quality and frame rate, system will show you how many record time you have left on the Hard Drive.
- **OVERWRITE:** If you select “AUTO” the system will automatically overwrite the oldest recordings once the hard drive is full; if you select “OFF”, recording will stop once the hard drive is full.
- **HDD FORMAT:** You use this option to format the hard drive, you can not record files to the hard drive until it has been formatted. Click [Format HDD] button to start formatting. When selecting [Format HDD] option the system will prompt you – “Format HDD will loss all the data, do you confirm?” ; click “OK”, system will prompt you – “Is formatting…” and “successful format”; and then system will restart automatically.

- **USB FORMAT:** Use this option to format USB devices.

Note: It is an important first step when configuring your DVR to make sure that the hard drive (HDD) options are correctly set. So, it is strongly recommended that you do format the HDD before start the first record.

5.2.6.2 Alarm Setup

Click [Main Menu→Device→Alarm] to enter into the below window shown as Picture 5-26 (a).

Picture 5-26 a

Picture 5-26 b

Click [Alarm Config] on the bottom of the [Alarm setup] screen to enter into the interface shown as Picture 5-26(b).Now you are allowed to set detailed alarm parameters.

- **Channel:** the option allows you select one channel you want.
- **HDD Loss:** When setting [Buzzer] to ON and there be no HDD detected or the HDD is not formatted, a small “H” appears on the screen with buzzer sound. Setting this to OFF will only show the “H” on the screen but the buzzer will not sound.
- **HDD Space:** When setting [Buzzer] to ON and the DVR is running out of storage space the buzzer will sound. No alarm will sound if it is set to OFF.
- **Video Loss:** When setting [Buzzer] to ON and when a camera has been disconnected. “Video Loss” icon will also appear on the screen with buzzer sound. Set to OFF, you will only see the “Video Loss” appear but no sound
- **Alarm Manage：**

Buzzer time: you can set how long the buzzer will sound when motion is detected (0s, 10s, 20, 40s, 60s);

Alarm duration time: you can set how long alarm record will last when alarm ends (0s, 30s, 1minute，2minute，5minute);

Pre-record time: you can set how long record will last before alarm occurs (Off, on).

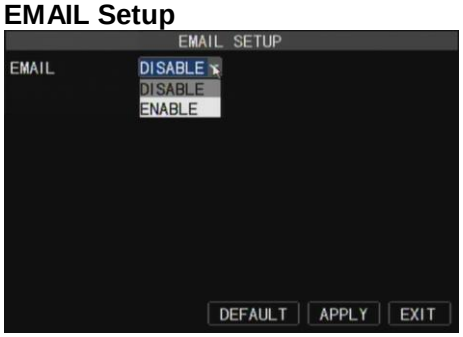
- **Full screen Alarm:** The function is defaulted to “On". When the motion detection or external alarm is triggered, the corresponding channel will be displayed on the full screen mode.
- **Email：** The option allows you set the alarm images is issued to a specified email or not.

You could freely select buzzer alarm or not for all the alarm types, and for the MD alarm you could set email and full screen reminder.

Alarm Type	Function
Video Loss	Sends alarm when DVR can’t receive video signal (such as camera damage, cable broken or damaged or power supply malfunction).
Motion Detection	When an object moves into motion detection area, alarm will be triggered. You can adjust sensitivity level to suit the needs of your actual application environment.
HDD loss	When Hard Drive is not detected (HDD damage, power supply malfunction), or HDD auto-overwrite is off, and free space is not enough, an alarm will be triggered.

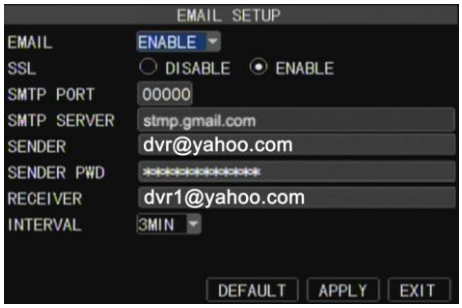
List 5-1

EMAIL Setup



Picture 5-27

Click [Email Set] to enter into the interface shown as Picture 5-27.



Picture 5-28

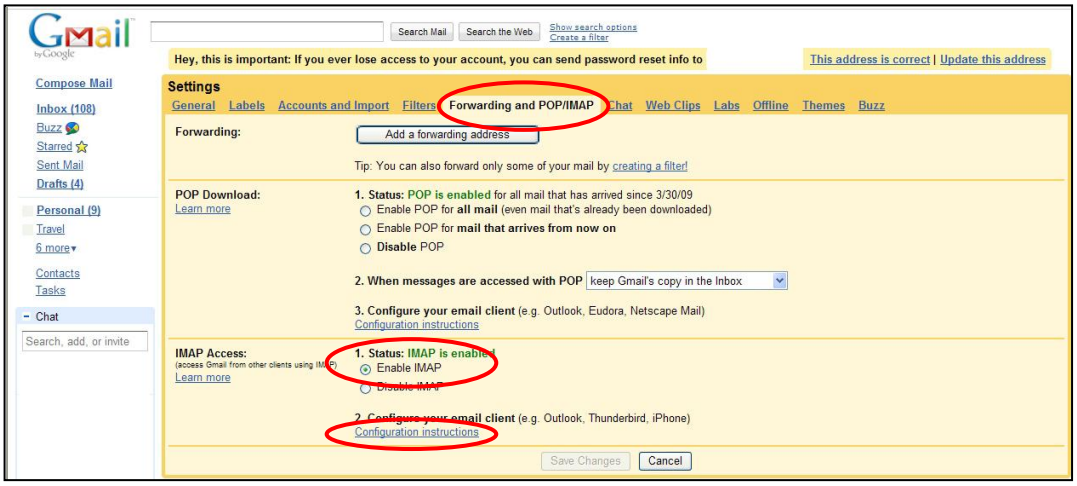
On the [EMAIL] screen, when Enabling [Email] option, you can set its parameters shown as Picture 5-28.

- SSL: is a security link transport protocol. You can encrypt your communication info (including your email) using SSL to prevent hackers from monitoring your email or communication info and even your password.

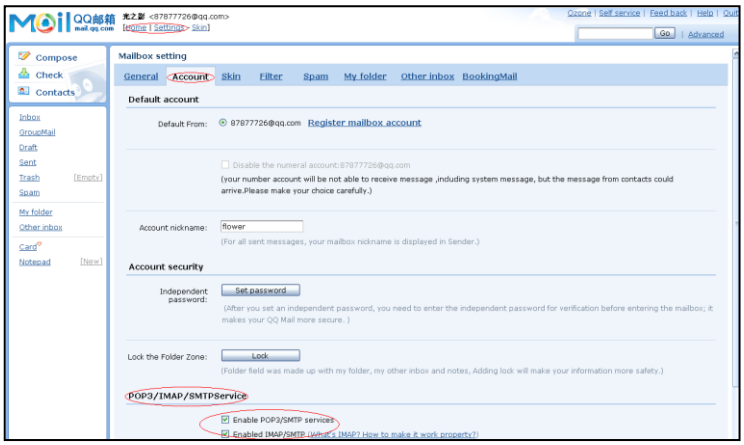
Generally Gmail.com server set SSL to [On] shown as Picture 5-28, and other mail server to [Off]. If your setting is still not correct, please contact the web site where you have applied for your email box to get SMTP port and SSL of mail box.

- **SMTP Port:** indicates sender port of SMTP server. Generally the SMTP port value is 25, but there are exceptions, for example, SMTP port of G-mail server should be 465.
- **SMTP server:** indicates server address you use.
- **Sender email:** indicates sender's email address. The email address should be consistent with the server you use. That is to say, when you use email address – aaa@gmail.com, the according server should be smtp.gmail.com.
- **Receiver address:** indicates receiver's email address. The email address is used to receive image transmitted from motion detection alarm of DVR. Please clear the images you have received as soon as possible to avoid overloading your email account.

Note: Sender email is required to enable IMAP/POP3/SMTP function (details please refer to Picture 5-29 & Picture 5-30, which show IMAP/POP3/SMTP Enable setting function for Gmail and SINA mail). Login your GMAIL ID and turn to Settings page. Find out Forwarding and POP/IMAP option and then tick-select [enable IMAP] option.



Picture 5-29



Picture 5-30

If you can't receive email alarm information successfully, please check below points:

- DVR connection is normal or not;
- The receiver and sender email support SMTP protocols or not;
- Email account setting is correct or not;
- Email alarm parameters configuration is correct or not;
- DVR is on the status of Motion detection or not.

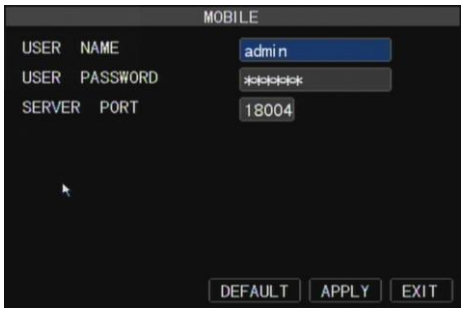
5.2.6.3 PTZ setup

Picture 5-31

Enter into [Main menu→Device→ PTZ Setup] to select the channel you desire to control and set PTZ protocol (Pelco-D or Pelco-P), Baud Rate (1200, 2400, 4800, 9600), Data bit (8, 7, 6, 5), Stop bit (1, 2), Parity Check (None, Odd, Even, Mark, Space), Address Code and Cruise status respectively. Please note the PTZ device can be activated only when a channel in connection with the PTZ camera is selected.

5.2.6.4 Mobile

The DVR is currently compatible with mobile phones running Andriod, Windows Mobile and Symbian, Blackberry and iPhone operating systems on 3G networks. Details access methods please refer to separate Mobile phone Access Instructions.



Picture 5-32

Click [Main menu→Device→Mobile] to enter into [Mobile] menu shown as Picture 5-32.

User Name: indicate user name of DVR.

User password: indicate user password of DVR

Server port: Mobile monitoring port. Setting range is between 1024 and 65535. Please note that

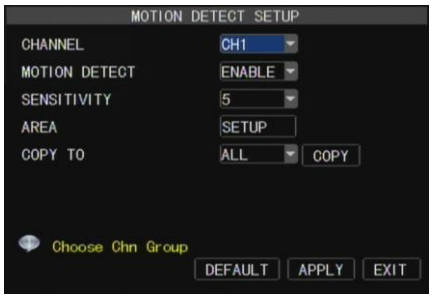
Explanation: Please connect DVR to Internet before setting DVR port number and the server port number is not equal to network menus.

Note:

1. The user name and password you enter can not be empty.
2. The Server port number is not equal to network Web port nor Media port you set.

You should forward the server port number to router (details please refer to section 5.2.3 – Network setting)

5.2.6.5 Motion Detect Setup



Picture 5-33

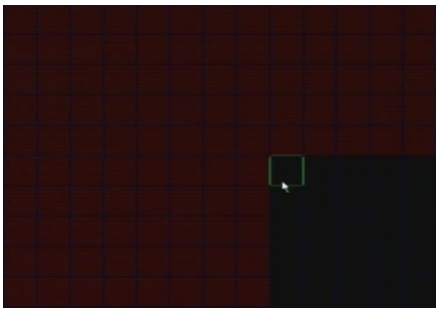
Click [Main→Device→Motion] to enter into the [Motion Detection] menu shown as Picture 5-33.

The [Motion detection] Menu has three sections, including Channel Status, Sensitivity and Motion area.

Channel STATUS: This option allow you enable motion detection on any channel.

SENSITIVITY: This option allows you to set sensitivity level of motion detection from higher to low with 4 being the most sensitive.

MD AREA: This option allows you select the area you want to be sensitive to motion.



Picture 5-34

The channel is separated into a 13X10 area. When any object moves into the motion detection area, and the area where the object is located is displayed in red recording will be triggered. In the semi-transparent area the motion detection is off.

5.2.7 System

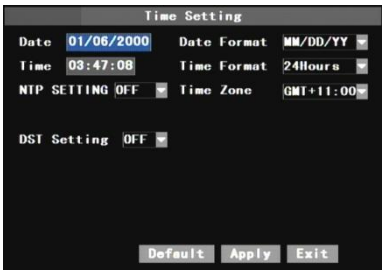
Picture 5-35

The [System] Menu includes the below sub-menus: Time Set, User Password, Audio/Video Setting, Language select, System Info and System Maintenance.

After entering into the [System] menu, you can configure the relative parameters to meet your needs.

After entering into the [System] menu, you can configure the relative parameters to meet your needs.

5.2.7.1 Time Setting



Picture 5-36

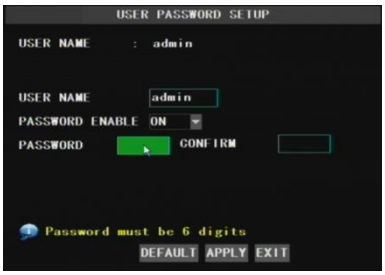
On the [System] menu screen, click [Time] icon to enter into [Time set] menu shown as Picture 5-36.

Now you are allowed to modify system date, time, date/time format and time zone, setup NTP (Network Time Protocol), DST (Daylight Saving Time) status and mode.

5.2.7.2 Password

Picture 5-37

This option allows you set the system password if you want to use one. The new passwords will be available after clicking [APPLY] button.



Picture 5-38

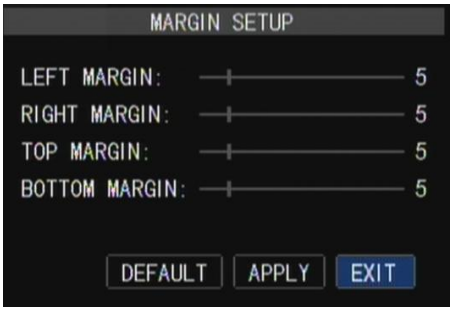
You can setup administrator password and 6 user passwords respectively. The password is consist of digital number 0~9 and supports up to 6 characters.

5.2.7.3 Video/Audio Setup

Click [Main Menu→System→Video/Audio] to setup Video and Audio parameters shown as Picture 5-39 (a).

Picture 5-39（a）

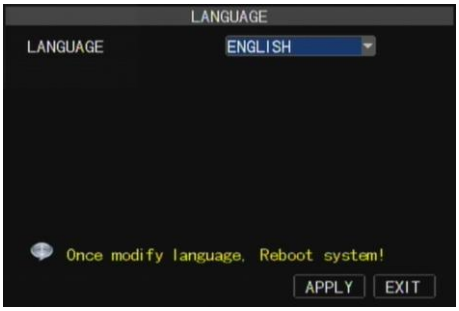
- **Video System:** allow you set Camera system (PAL, NTSC).
- **VGA Resolution:** include five options - 1280×1024、1024×768、800×600 and 1440×900.
- **OSD Device:** allow you select video output device, Main output and VGA. User can hold pressing [Rew] button on the front panel to convert output device quickly.
- **Poll time：** allow you select sequence time between from 5s and 300s.



Picture 5-39（b）

Click the [Volume] and/or [Margin] options on the right-bottom corner of the Video/Audio screen to adjust the volume and/or margin respectively. Details please kindly find the Picture 5-39 (b).

5.2.7.4 Language



Picture 5-40

Enter into [Language] menu to select the language you want to use on the DVR (shown as Picture 5-40), and then click [APPLY] button. The selection will be available after system Auto restarts.

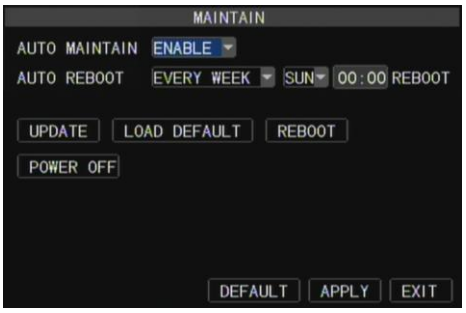
5.2.7.5 System Information

Picture 5-41

Enter into [System Information] menu to view system info, including Device type, Software (firmware) version, IE version and MAC address, etc.

DEVICE ID: This option allows you set the device ID for the DVR.

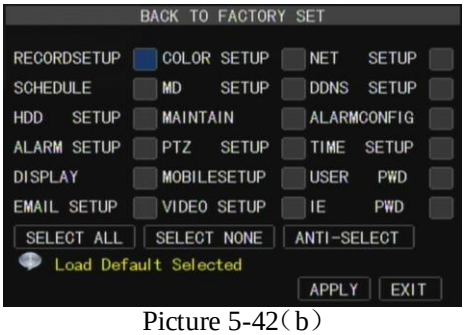
5.2.7.6 Maintain



Picture 5-42（a）

This option allows you recover the DVR settings to factory default settings, update system software (firmware), and set system auto-maintenance. Click [Main menu→System→Maintain] to enter into the [System Maintain] menu shown as Picture 5-42(a).

- **Auto Maintain:** After enabling [Auto Maintain] function, system will perform regular maintenance as per the schedule you have set. Please note the [Auto Maintain] function will be available only when DVR is on the Main interface and have no user online.
- **System Update:** Copy the file named with "dvrupgrade" to USB flash drive; and connects USB flash drive to USB port of DVR, and then click [System upgrade] menu.
- **Default:** Click the [Load Default] button to recover all the DVR settings back to factory set.
- **Reboot:** Click the [Reboot] button to restart the device manually.
- **Power off:** the button allows you cut the power after making sure the DVR shutdown.



Picture 5-42（b）

Picture 5-43

Note:

1. Please obtain the updated program from local supplier before system updating.

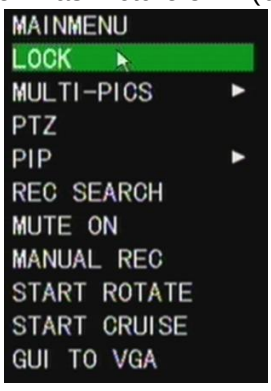
2. Please do not cut power nor unplug USB flash disk during the update.

3. System will automatically restart after finishing system update.

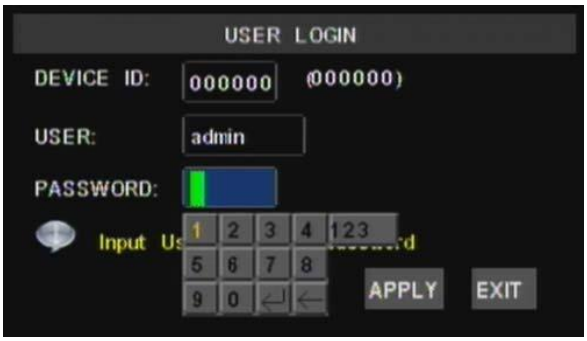
4. User needs to manually recover the ex-factory default setting after restarting.

5.4 Menu Lock

Considering a system safety feature, you can click [Menu Lock] menu to lock menu when leaving the DVR shown as Picture 5-44(a). If you want to login in the DVR again, you would input device code and password shown as Picture 5-44 (b).



Picture 5-44(a)



Picture 5-44(b)

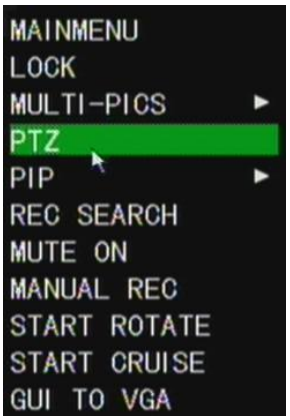
Explanation: Common user only has the authority to search recordings, but Administrator has full authority over Main Menu operations.

Any user can start and close manual record on the non-record mode.

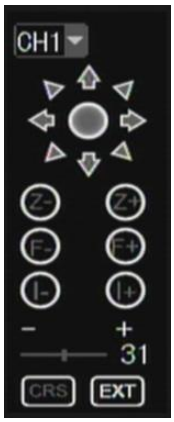
5.4 Record search

You could enter into [Record Search] menu from Pop-up menu conveniently and quickly and search/playback the record histories. We introduced Record search details previously in section 5.2.4.

5.5 PTZ Control



Picture 5-45



Picture 5-46

Picture 5-47

Picture 5-48

Open auto cruise function on PTZ setting menu if you want to setup cruise function (system default: on), and set up cruise channel, preset points, total quantity and stop time, etc.

- **Channel select:** select one channel with PTZ camera
- **Total:** set up pre-set bit quantity
- **Pre:** indicates starting point cruised. System default point is 01.
- **STP**：sets the stop time at each point
- **GOTO**：allow you go to a specific preset point.
- **SET**：allow you set a set of specific preset points of a PTZ camera.
    1. Select a camera you desire to set a preset point;
    2. Adjust the camera in a desired direction
    3. Click [Set] to set the point as preset point
    4. Click [Save] to save the preset point
    5. Follow the above step to add one more preset point.
- **CLR:** allow you delete one selected preset.

Note: Up to 255 preset bits for the DVR can be stored. However, actual preset quantity differs depending on PTZ performance.

5.6 Record

Enter into Pop-up menu to select the [Record] option. Now you can start manual record function, or you also can click [Rec.] button on the Front panel or Remote controller to activate manual record. Please stop record manually once you activate manual record.

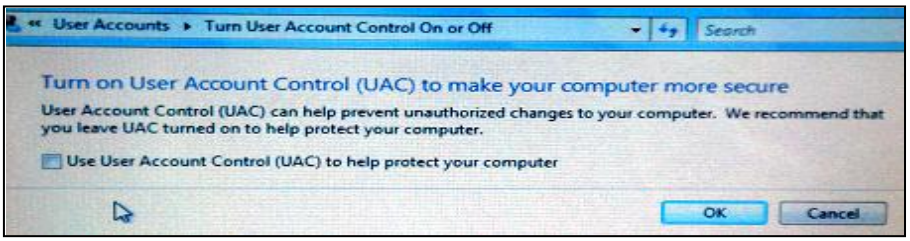
5.7 Stop Record

To stop record quickly, please enter into pop up Menu to select [Stop] option.

Chapter 6 Web Application Manager

6.1 Plug-ins download and installation

1. Open your web browser and input the IP address and web port of DVR;
2. If your computer is connected to internet, you will be prompted to download and install "ActiveX Control";
3. You may have "Windows Security Alert" that attempts to block this with the windows Firewall. In that case, click [Unblock] button to continue your installation processing.
4. The Vista system user may need to set user authority. Details please refer to the below:


User Accounts ▸ Turn User Account Control On or Off
Search
Turn on User Account Control (UAC) to make your computer more secure
User Account Control (UAC) can help prevent unauthorized changes to your computer. We recommend that you leave UAC turned on to help protect your computer.
Use User Account Control (UAC) to help protect your computer
OK
Cancel

Reminder: If the plug-in program is not downloaded successfully, please check if your browser's safety level or firewall setting is too advanced. Also refer to section 5.2.3 Network Setup to make sure network configuration is correct, ports are forwarded correctly, and ActiveX is enabled.

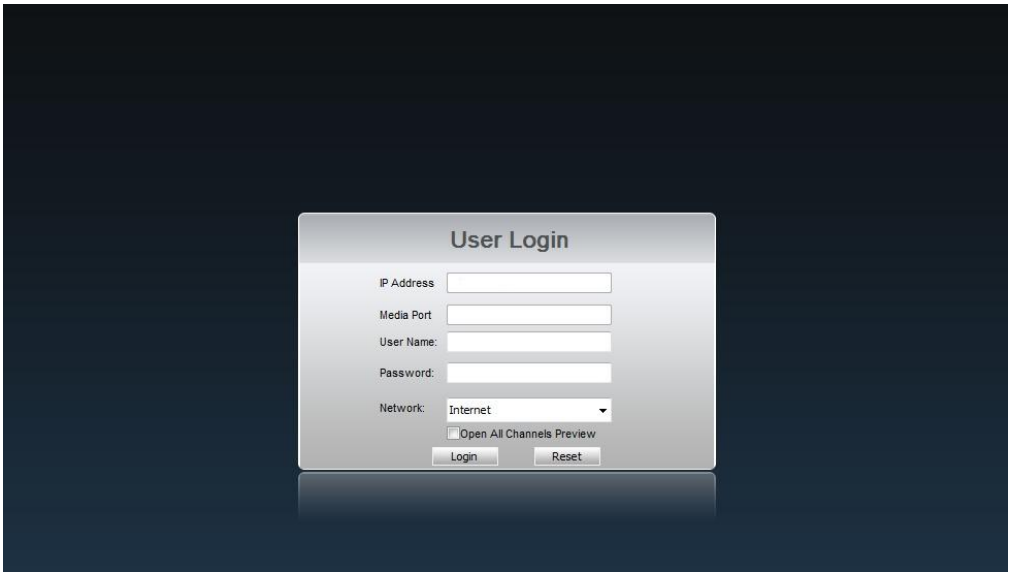
Note: If you want to delete old IE webcam at DVR system update, run the command characters: "regsvr32 /u HiDvrOcx.ocx"

6.2 Web Client Log-in

After plug-ins installation, please enter user name / password and click [Log-in] button, and now you can view DVR remotely through the Web Client.

Please note default password is empty. System allows Administrator to set new password as per instructions in section 6.3.1.3 - [Device Manage] menu.

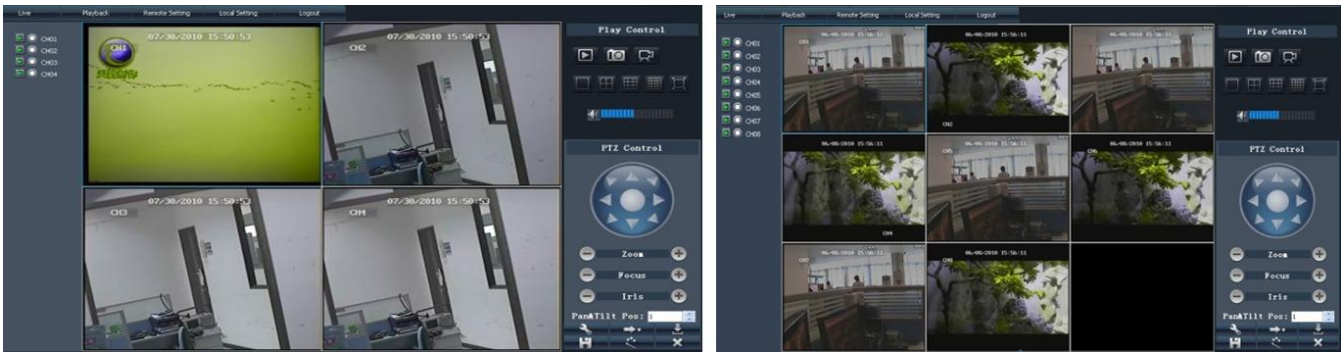
4-CH and 8-CH DVR allow you have respectively five users and three users on-line simultaneously.



Picture 6-1

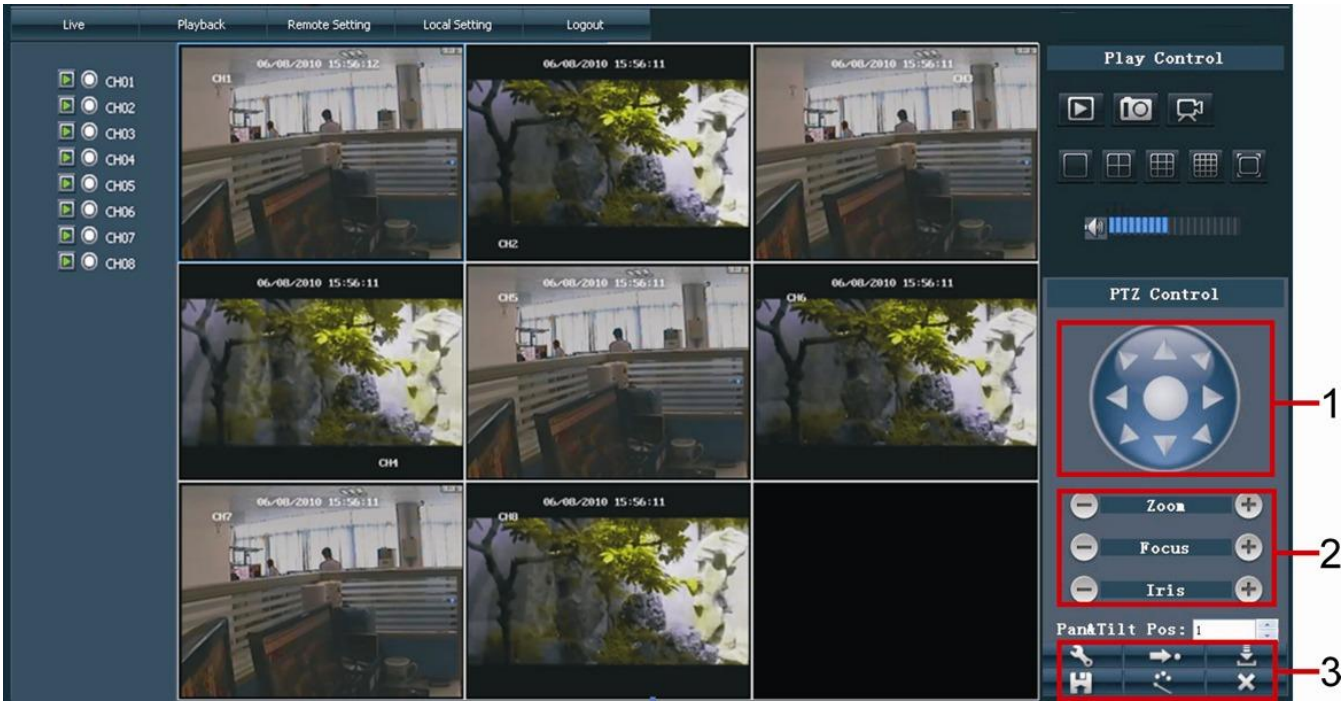
After successful logging-in web client, you will enter into the Live interface shown as Picture 6-3 and

simultaneously Audio / Video will be automatically connected well (Shown as Picture 6-2(a) and (b)).



4 CH 8CH

Picture 6-2(a)



Picture 6-2(b)

6.3 Web Client Interface

6.3.1 Menu Bar

Menu bar include [Live], [Playback], [Remote setting], [Local Setting] and [Logout] option.

6.3.1.1 Live Display

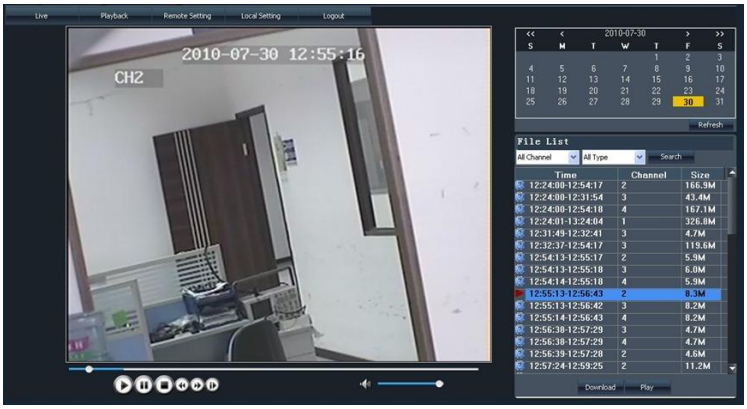
After PC Web Client logged in, system will be defaulted to enter into Live mode. User can open or close image preview by Play control bar, and select display modes, including full screen mode, 4-split mode and 9-split mode.

Click the [ ] icon of one channel to display the channel's image.

Click the [ ] icon to start manual record.

6.3.1.2 Playback

Click [Playback] option to playback record files from remote DVR by selecting relevant date, channel and type. Details please refer to below Picture 6-3.



Picture 6-3

Double-click any file listed or highlight any file and click [Play] button to play the selected recording file.

Click [Download] button to download and save selected recording file to specified saving path shown as Picture 6-4.

Picture 6-4

You can set [Save Path] option on the [Local Setting] menu.

The [Play control] bar is located at the bottom of the interface, include [Play], [Pause], [Stop], [Slow Play], [Fast Play], [Next Frame] and [Volume adjust] option.

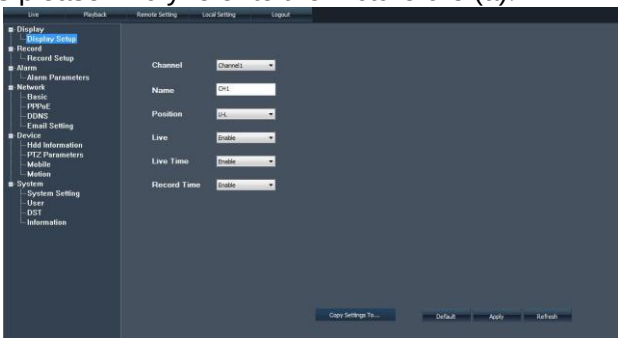
6.3.1.3 Remote Setting

Click [Remote setting] option and enter into the interface shown as Picture 6-5. Now you are allowed to perform the parameter settings of Channel, Alarm, PTZ, Network and Device manage.

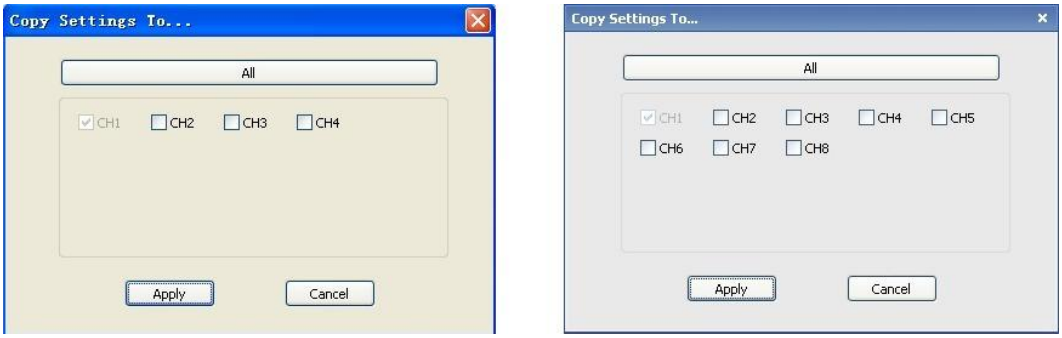
Note: The remote setting is available only when the DVR is on the Live mode, and setting method is same as Local setting.

✧ **Display**

Click [Display Setup] option to set Channel Name, Position, enable Live display / Live time and Record time for each channel. Details please kindly refer to the Picture 6-5 (a).



Picture 6-5 (a)



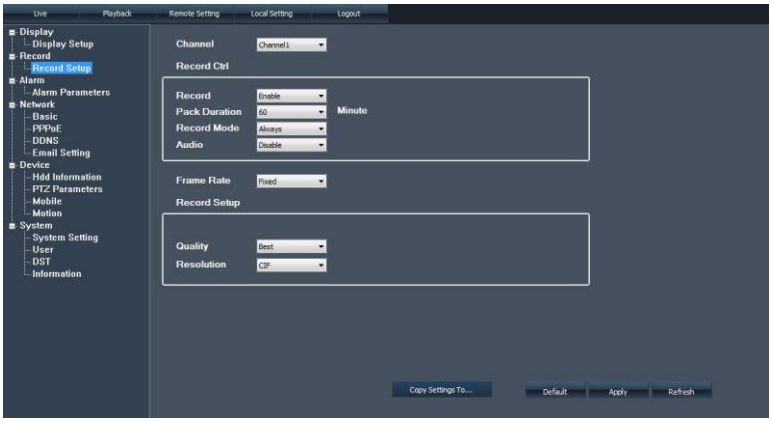
4CH 8CH

Picture 6-5 (b)

Click [Copy Settings To] option on the right-bottom corner of the interface to copy all the remote setting to any channel shown as Picture 6-5 (b).

✧ **Record**

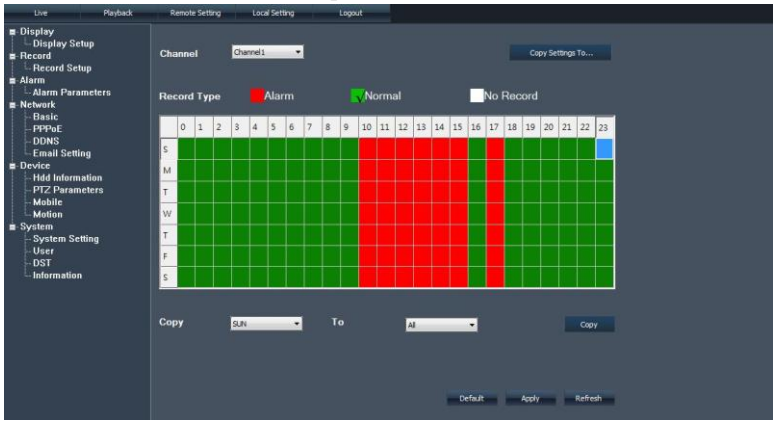
Enter into [Record Setup] option to set record control parameters, including record enabling, audio enabling, Pack duration, Record mode, Frame rate, Quality, Resolution and schedule etc. (shown as Picture 6-6a and 6-6b)



Picture 6-6a

Click the [Schedule] menu to enter into its sub menu (shown as Picture 6-6b).

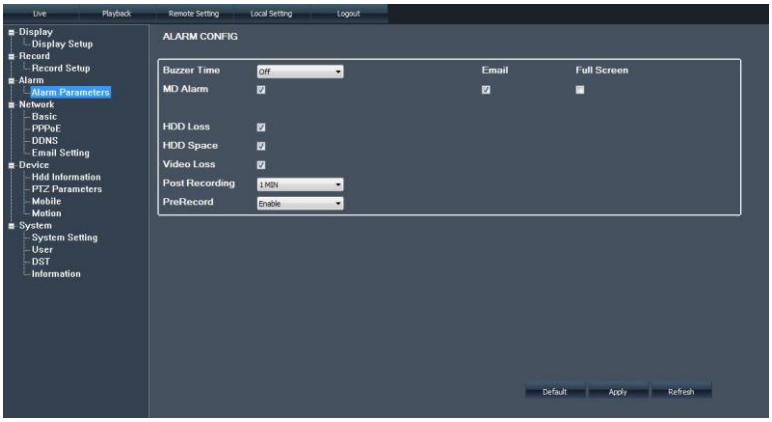
Remote setup methods are the same as local DVR setup. Please refer to Section 5.2.2 Record Setup.



Picture 6-6b

✧ **Alarm**

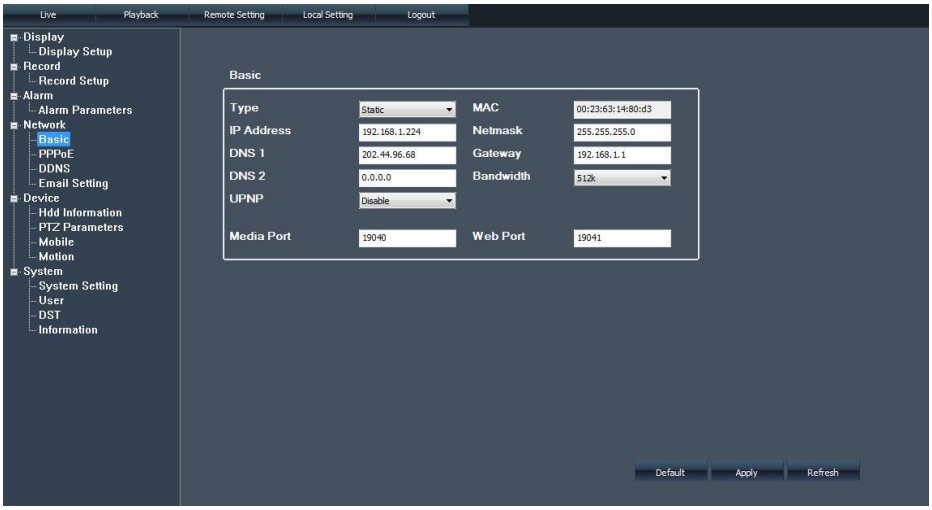
Click [Alarm Parameters] option, you are allowed to set Buzzer time, Post Record time and also Motion Detect function, Email, Full Screen, HDD loss, HDD space, Video loss enabling/disabling and Pre-record function enabling/disabling.



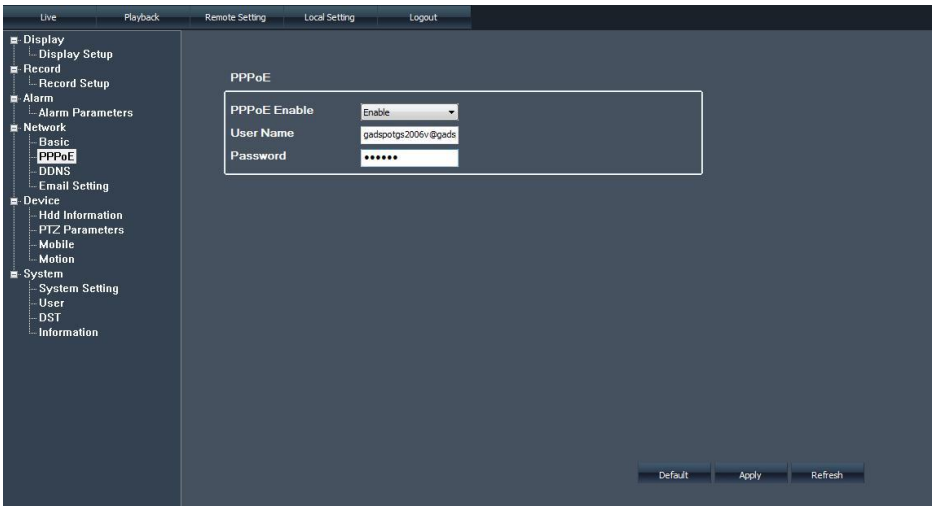
Picture 6-7

✧ **Network**

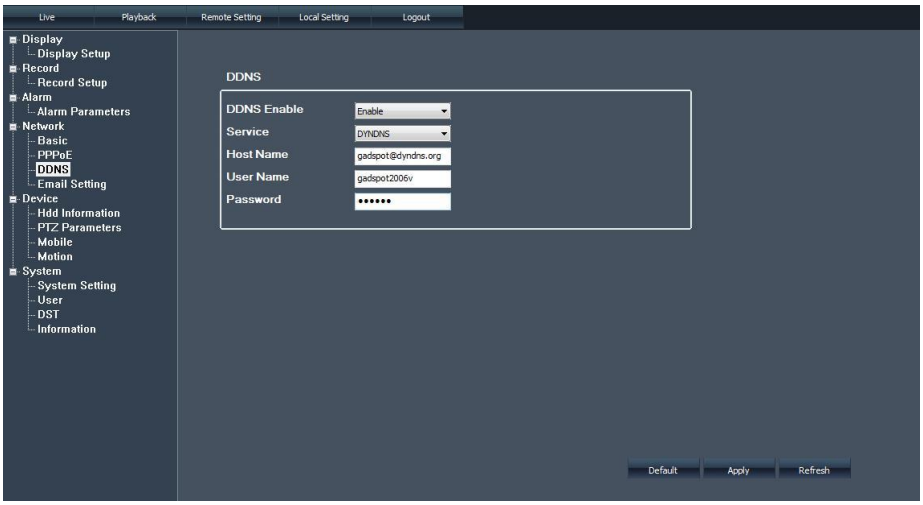
Click [Network Parameters] option to enter into [Network setting] menu, including [Basic], [PPPoE], [DDNS], and [Email setting] (Picture 6-8 ~ Picture 6-11). Relevant parameters setting please refer to section 5.2.3 – [Network Setting].



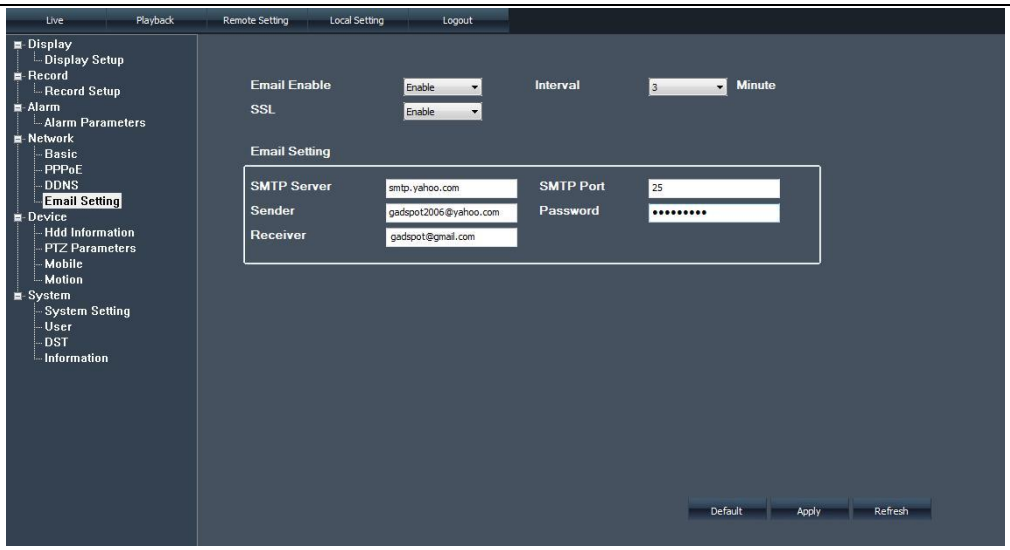
Picture 6-8



Picture 6-9



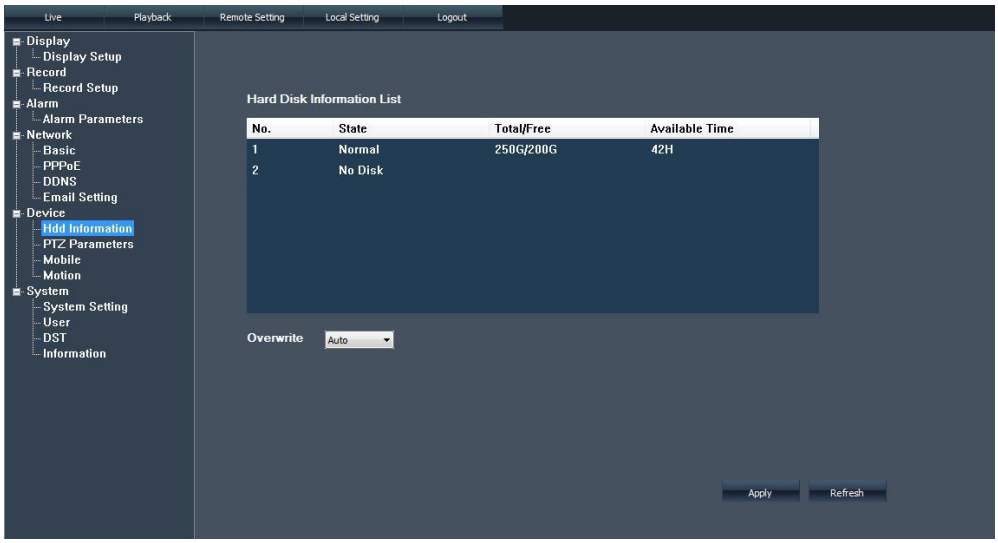
Picture 6-10



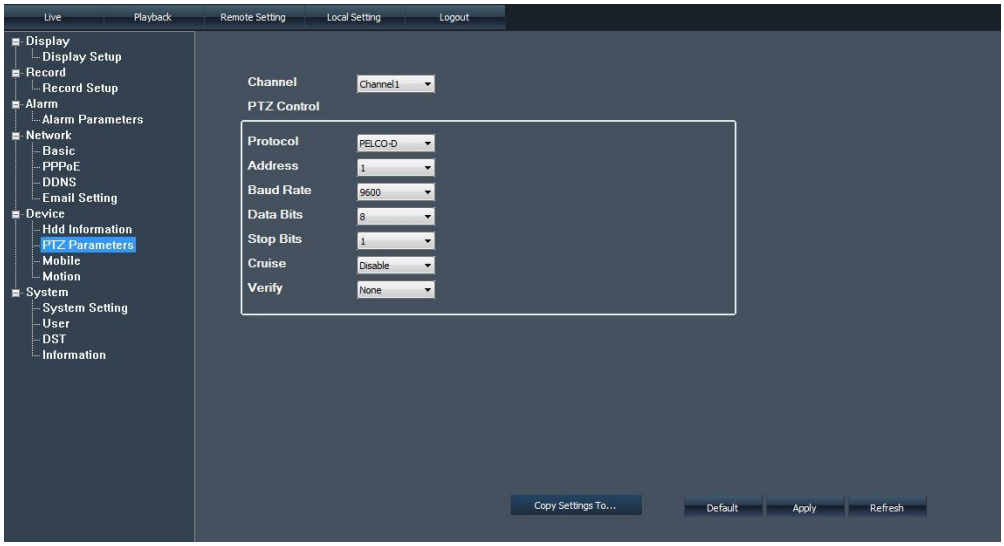
Picture 6-11

✧ **Device**

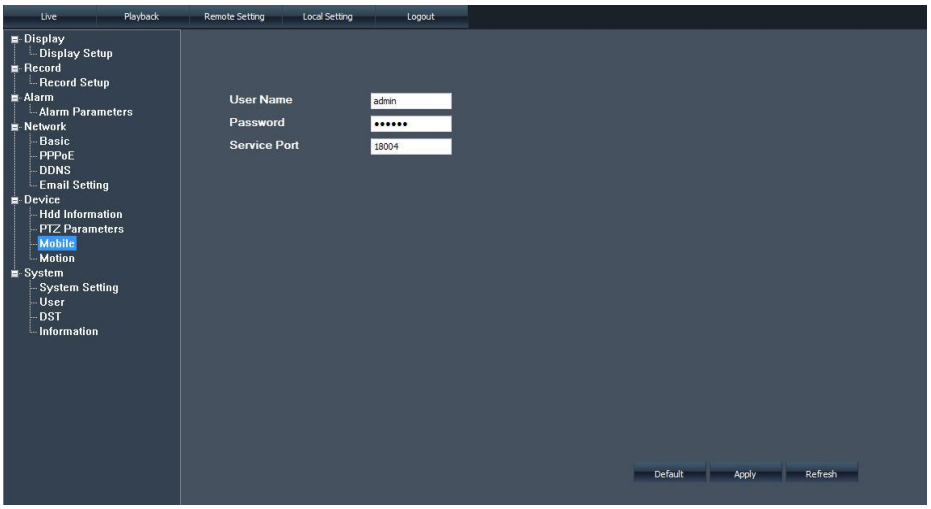
Click [Device Parameters] option to enter into the interface shown as Picture 6-12. Now you can check HDD info (Picture 6-13), PTZ parameters (Picture 6-14), Mobile (Picture 6-15) and Motion (Picture 6-16).



Picture 6-12

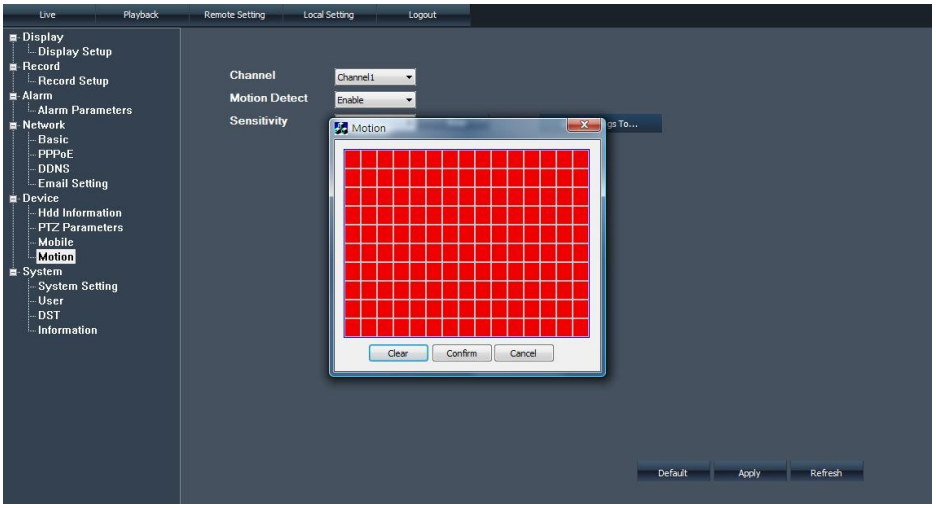


Picture 6-13



Picture 6-14

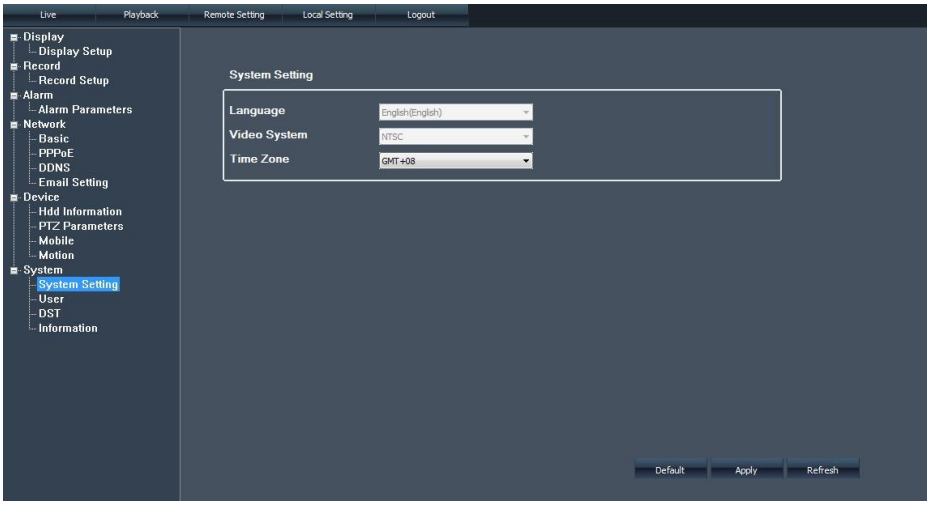
Click [Motion] option, you are allowed to set Motion channel, its sensitivity and MD Area, and also copy the settings to other channels.



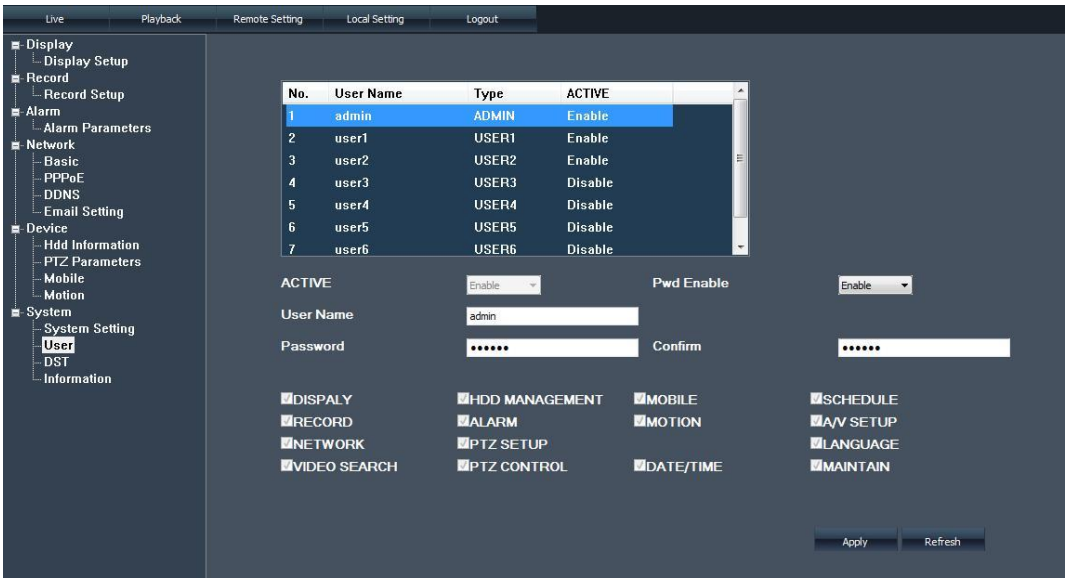
Picture 6-15

✧ **System**

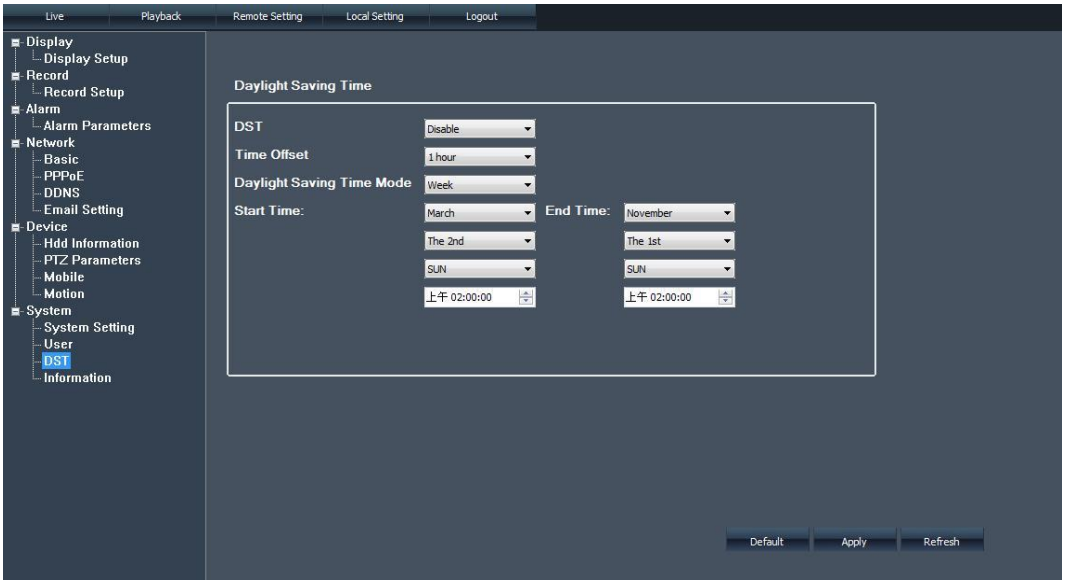
Extend [System] option to enter into sub menus – System setting, User, DST and Information shown as Picture 6-16, Picture 6-17, Picture 6-18 and Picture 6-19.



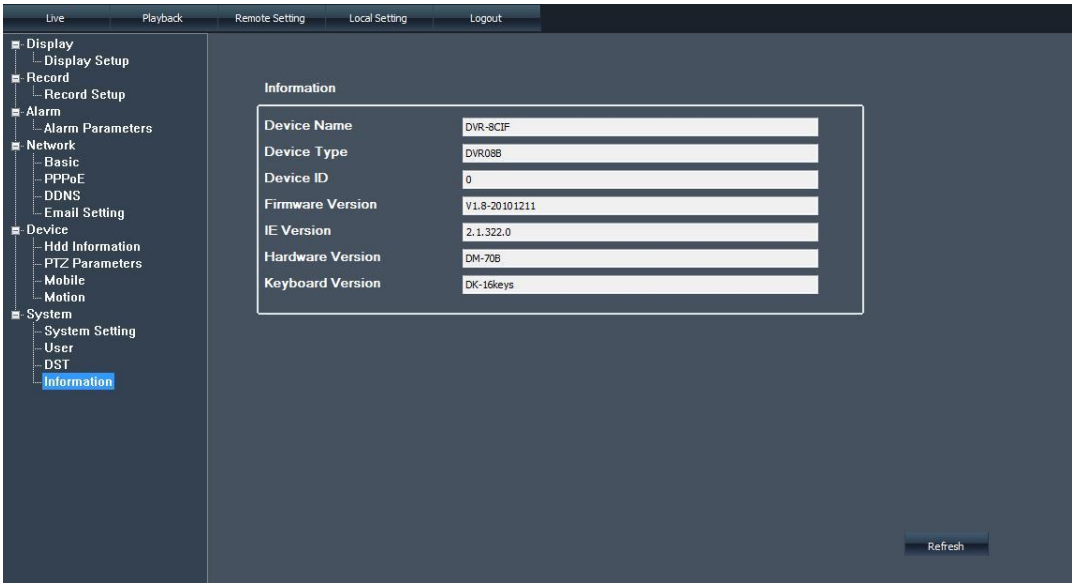
Picture 6-16



Picture 6-17



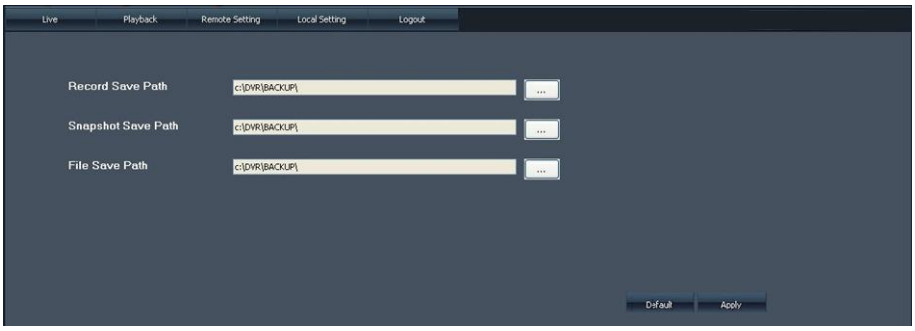
Picture 6-18



Picture 6-19

6.3.1.4 Local setting

The option allows you set [Record Save Path], [Snapshot Save Path] and [File Save Path] shown as Picture 6-23.



Picture 6-20

Note： Remote manual recording file will be saved to Record save path.
Local recording file will be saved to [File save path].

6.3.1.5 Logout

Click [Logout] option to return back Log-in Interface shown as Picture 6-1.

6.3.2 PTZ Control

1. PTZ direction control: the buttons allows you control PTZ moving direction.
2. Zoom, Focus and Iris control: the buttons allows you control PTZ moving direction, zoom, focus and iris.
Preset bit control

1. Pan & Tilt Pos: indicates starting point you desire to cruise firstly.

: On the Live mode, enter preset point number you want to display and click the icon to load the last preset point you set.

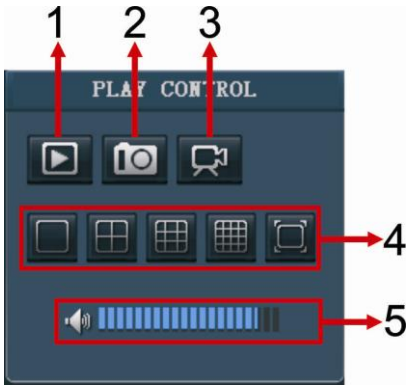
: allow you set a series of specific preset points of a PTZ camera, and click [ ] icon to save the preset point you set.

: input the preset point no you want to display and click the icon to quickly go to the preset point on live mode.

Clicking the [ ] icon allows you delete the current preset point.

: allow you enable/disable the [Cruise] function.

6.3.3 Play Control



1. On/Off Live display: clicking the button will open or close live display.

2. Capture: clicking the button will capture the live image from one selected channel and save the image with *.bmp format to PC.

3. Record: clicking the button will remotely record the live images and automatically save the recording to a specified position.

4. Channel display mode: the icons stand for the Single channel display, Quad display, 9-split mode, 16-split mode and full screen mode respectively.

5. Volume control: clicking the icon to adjust sound volume.

Chapter 7: Specifications

Model parameter	4CH	8CH
Video System	NTSC/PAL(Optional)	
Video/Audio Compression Format	Video：H.264 Audio：8kHz*16bit ADPCM	
Video I/O	4-CH BNC input; 2-CH BNC output; VGA (Optional);	8-CH BNC input; 2-CH BNC output; VGA(Optional);
Audio I/O	4-CH input / 2-CH output	4-CH input / 2-CH output
Display Resolution	D1：704×576(PAL) 704×480 (NTSC)	
Display frame rate	Single Channel PAL：25 fps ，NTSC：30 fps	
Record Resolution	PAL: CIF(352*288) HD1(704*288) D1 (704*576） NTSC:CIF(352*240) HD1(704*240) D1 (704*480)	
Record Total frame rate	PAL：50 fps@D1、100 fps@HD1、200 fps @CIF NTSC：60 fps@D1、120 fps @HD1、240 fps @CIF	
Image Quality	Best / Good / Middle	
HDD	Support SATA HDD	
Record Mode	Always, Scheduled, Manual, motion, Web Client record.	
Pack Time	15/30/45/60 min (adjustable)	
Backup Function	Support USB flash disk, removable HDD and network backup Backup file format is *.264 format and network file will automatically be backed-up to AVI format.	
Playback Mode	Normal play, Fast Forward, Rewind and slow play frame by frame.	
Alarm I/O	N/A	
Alarm Mode	Motion Detection, Video Loss, HDD Full, HDD Error	
PTZ control	Embedded RS-485 port / supports PELCO-P & PELCO-D protocol.	
USB Port	Support Mouse, removable HDD and USB flash disk backup and upgrade.	
Network Interface	One RJ-45 10M/100M Ethernet interface.	
Network Function	Support Mobile surveillance, IE browsing, Remote Live surveillance and parameter setting.	
Network Protocol	Supports TCP/IP, DHCP, DDNS, PPPOE network Protocol	
IR remote control	Support IR remote control.	
Power Adapter	DC 12V/3A	
Power Consumption	10~15W (excluding HDD)	
Operational Temperature	10℃~+40℃	
Operational Humidity	10%~90%	

List 7-1

Chapter 8: Appendix

8.1 Record Alarm setting

Please refer the below matrix: "⊥" stand for "only alarm but no record"; "AMR" stand for "alarm record"; "NLR" stand for "normal record"; and "NOR" stand for " no record". Once alarm is triggered, alarm icon will occur, and when many alarms are triggered, alarm remarks will occur on the screen.

Record alarm setting		Alarm icon	Record Mode				
			Record after power on	Scheduled recording			Manual Record
				AMR	NLR	NOR	
Alarm mode	MD alarm	M	AMR	AMR	NLR	⊥	NLR
	HDD loss, HDD Full	H	⊥	⊥	⊥	⊥	⊥
	Video Loss	Video Loss	⊥	⊥	⊥	⊥	⊥

List 8-1

In the record mode, [R] icon or [M] icon will appear on the screen. When [H] icon appears on the screen, that means HDD alarm has occurred.

8.2 Sustainable Record Time List

The sustainable record time differ depending from Resolution, Para, Video Input, Image parameter and Audio input etc.

Factor:

Audio set to ON / 4-CH video input / Twenty-four hours Continuous record / 250G HDD / Unit: Day

Resolution	Quality (Image Quality)		
	Best	Good	Middle
D1	6	8	11
HD1	6	8	11
CIF	8	11	14

List 8-2

Calculation formula:

$$\frac{250 \times 1024}{1402 \times 24}$$

When using 250G HDD and Record for 4-CH occupies 1402M space per hour, system can continuously record 183 hours.

8.3 Mail box server List

Web site	Mail box	Sender server（25）	Receiver server（110）
www.163.com	@163.com	smtp.163.com	pop3.163.com
	@vip.163.com	smtp.vip.163.com	pop.vip.163.com
	@188.com	smtp.188.com	pop.188.com
	@126.com	smtp.126.com	pop3.126.com
	@netease.com	smtp.netease.com	pop.netease.com

	@yeah.net	smtp.yeah.net	pop.netease.com
www.qq.com	@qq.com	smtp.qq.com	pop.qq.com
163.net		smtp.163vip.net	popx.163vip.net
www.sina.com	@sina.com.cn	smtp.sina.com.cn	pop3.sina.com.cn
www.yahoo.com	@yahoo.com.cn	smtp.mail.yahoo.com.cn	pop.mail.yahoo.com.cn
	@yahoo.com	smtp.mail.yahoo.com	pop.mail.yahoo.com
google.com	@gmail.com	smtp.gmail.com(465/587)	pop.gmail.com(995)
www.china.com	@china.com	smtp.china.com	pop.china.com
www.sohu.com	@sohu.com	smtp.sohu.com	pop.sohu.com
Mail.163.com		smtp.163.net	pop.163.net
Mail.163vip.com		smtp.163vip.net	pop.163vip.net
Mail.tom.com	@tom.com	smtp.tom.com	pop.tom.com
Mail.263.com	@263.net	smtp.263.net	pop3.263.net
x263.net		smtp.x263.net	pop.x263.net
263.net.cn		smtp.263.net.cn	pop.263.net.cn
139 mail box	@139.com	smtp.139.com	pop.139.com
21cn.com		smtp.21cn.com	pop.21cn.com
Vip.21cn.com		vip.21cn.com	vip.21cn.com
etang.com		smtp.etang.com	pop.etang.com
elong.com		smtp.elong.com	pop3.elong.com

List 8-3

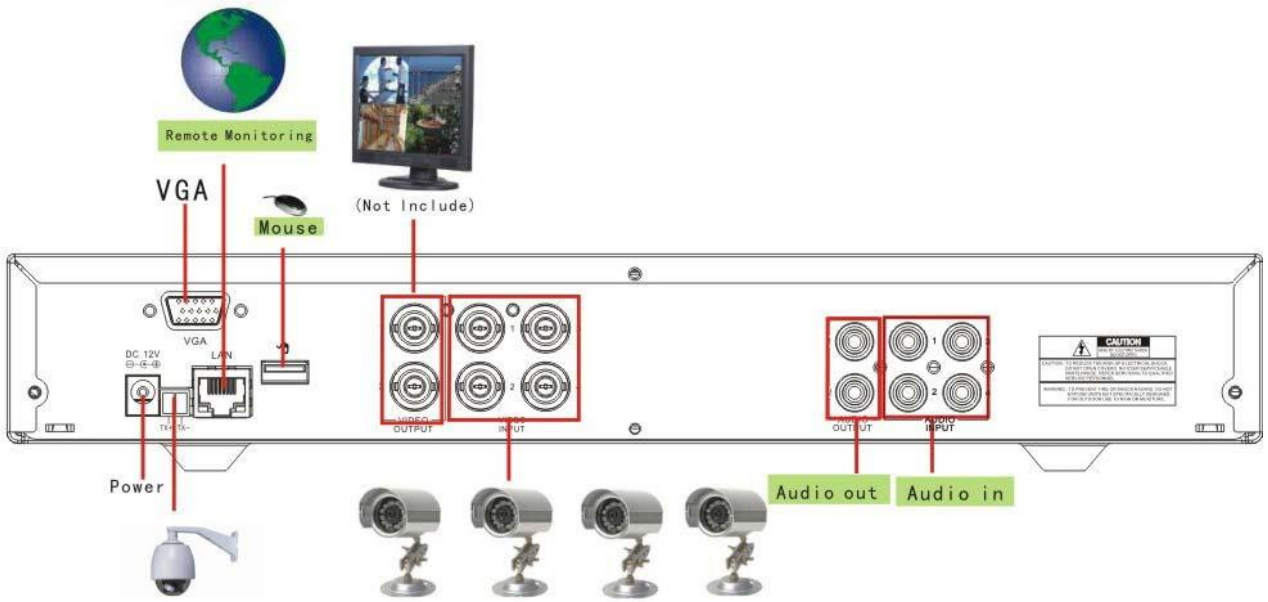
8.4 Troubleshooting

1. Q: What can I do if the system does not detect the HDD?
   A: Check if the power supply system is properly connected and data cord and power cables are securely connected.
2. Q: We have changed the password but do not remember the new password, how can we access the system?
   A: If you forget system password, please consult with the service personnel.
3. Q: We are not getting any video signal on the DVR, what is wrong?
   A: Check camera video cable and connections; or check monitor video cable and connections; or confirm that the camera has the power and / or check camera lens setting.
4. Q: Why some channels display just a blank screen even if they receive video sources?
   A: Check if the camera is connected to the system properly displays the image; check if the camera is properly supplied with power.
5. Q: Does the DVR have problems if it gets too hot, how can I prevent this?
   A: Please place the DVR in a place where there is good air circulation and away from heat sources to increase stability and life of the DVR.
6. Q: “Record” cannot work normally, how to deal with?
   A: Check if the current screen is in Play mode, pressing [Stop] button to exit the Play mode and then you can enter into the [Record] function.
7. Q: Why the Remote Controller can’t work normally?
   A: Check if the battery is power off; or check if the Remote Controller is broken.
8. Q: Can we record whilst playing-back?
   A: Yeah, you can do it. The system supports you record whilst playing-back.
9. Q: Can we erase some recorded files from DVR.
   A: Considering the safety factor, you can’t delete the recorded file directly from the device. When you actually want to erase all the recorded files, please select HDD format function.

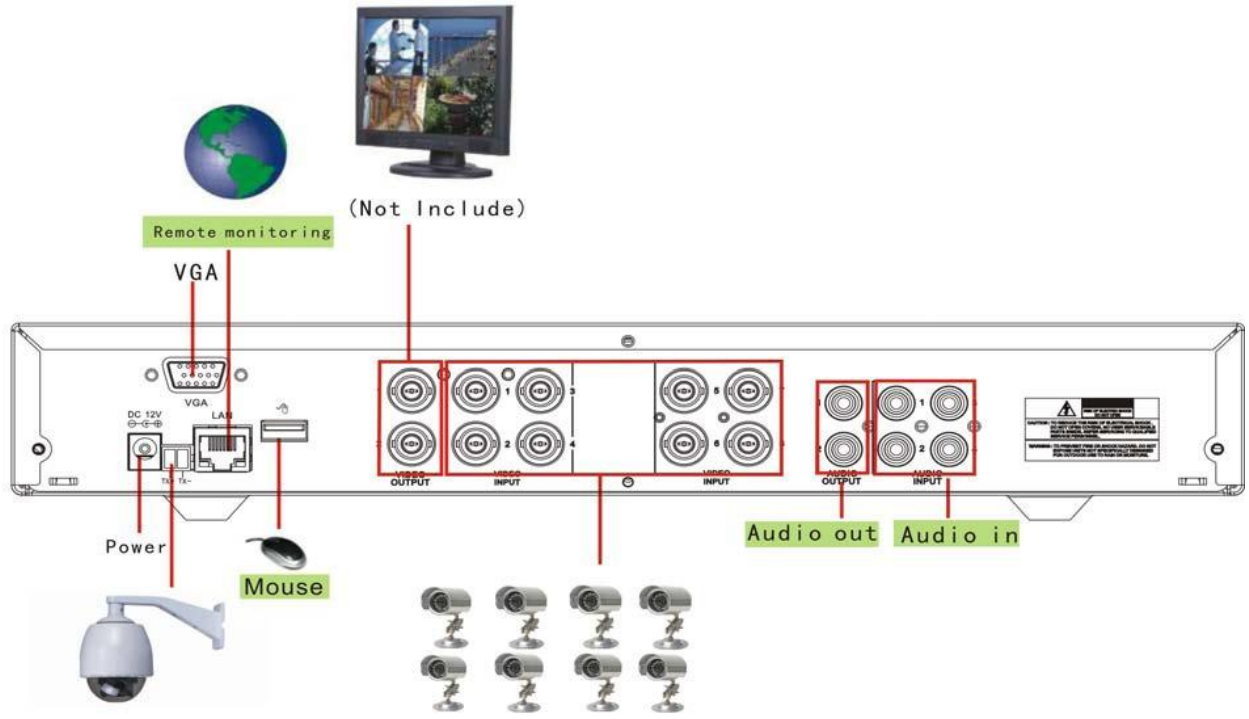
10. Q: Why does the Buzzer keep sounding?
    A: Please check if motion detection is on and the system has detected motion, make sure the HDD is being detected and has sufficient space available; check if video has lost etc.
11. Q: Why can't I stop recording by pressing [Stop] button?
    A: Pressing [Stop] button can only stop manual record. If you want to stop Scheduled record, please revise to [No Record] during this period.

8.5 System Configuration

4-CH DVR



8-CH DVR



8.6 Accessories

☐ **Power Cord**

☐ **Power Supply**

☐ **User Manual**

☐ **USB Mouse**

☐ **Remote Controller**

☐ **Software CD**

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